

**REPUBLIC OF TURKEY  
YILDIZ TECHNICAL UNIVERSITY  
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**WEST COASTLINE RAILWAY STATION BUILDINGS IN  
MALAYSIA DURING THE BRITISH ERA, 1885-1957**



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**PhD. THESIS  
DEPARTMENT OF ARCHITECTURE  
PROGRAM IN HISTORY AND THEORY OF ARCHITECTURE**

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**İSTANBUL, 2018**

**REPUBLIC OF TURKEY**  
**YILDIZ TECHNICAL UNIVERSITY**  
**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**WEST COASTLINE RAILWAY STATION BUILDINGS IN  
MALAYSIA DURING THE BRITISH ERA,1885-1957**

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## ACKNOWLEDGEMENTS

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I would never have been able to finish my thesis without the guidance of my supervisor, helps from friends, and supports from my family.

I would like to express my deepest gratitude to my supervisor, Prof Dr. M. GulAkdeniz, for her excellent guidance, caring, patience and providing me with an excellent atmosphere in doing the research. My sincere thanks also to Ass. Prof. Amran Abd Rahman and his wife, Ass. Prof. Nakiah Md. Amin for spending their precious time to proofreading my thesis.

My thanks also go to the curator of Keretapi Tanah Melayu Berhad, Mr. Zainuddin Abd. Rahman for spending time looking and checking on the catalogue, in order to make sure they are providing the genuine information on station buildings. Not to forget to the Center for The Study of Built Environment in The Malay World (KALAM), University Technology Malaysia and Centre for Modern Architecture Studies in Southeast Asia (MASSA), Taylor' College for providing useful information related to station buildings.

My heartfelt gratitude also goes out to my beloved mom, Wan Hamidah Haji Muhammad, and my supportive siblings. My sincere thanks also go to my friend, Anis Zulia Ariffudin and Nur Emmaliza Azwer who supports me and always being together with me in findings data throughout Malaysia.

Finally, I would like to thank all my friends who always there cheering me up and stood by me through good and bad times.

Alhamdulillah, Thank You.

April, 2018

Nor Hafizah ANUAR

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## LIST OF ABBREVIATIONS

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ANM	Arkib Negara Malaysia
KALAM	Pusat Kajian Alam Bina Dunia Melayu, Universiti Teknologi Malaysia
UNESCO	United Nations Educational, Scientific and Cultural Organization
URA	Urban Redevelopment Authority, Singapore
FMSR	Federated Malay States Railway
MRA	Malayan Railway Administration
MSR	Muar State Railway
MASSA	Centre for Modern Architecture Studies in Southeast Asia, Taylor's College
PAM	Pertubuhan Arkitek Malaysia
ECRL	East Coast Rail Link

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## ABSTRACT

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# WEST COASTLINE RAILWAY STATION BUILDINGS IN MALAYSIA DURING THE BRITISH ERA, 1885-1957

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Department of History and Theory of Architecture

PhD. Thesis

Adviser: Prof. Dr. M. Gül AKDENİZ

This research concentrates on railway station buildings of the West Coastline in Malaysia. The growing tin ore mining and rubber industry resulted in the development of railways and consequently railroad station buildings as urgency for the transportation of goods and people in terms. The existence of railway transportation became more significant when the city started to bloom and the British started to build public buildings such as administrative buildings, town and city halls, public works department, courts, post offices alongside with the railway station buildings. Compilations of the West Coastline railway station buildings are documented in the catalogue. It also attempted to make an analytical study on their plans, architectural characteristics and styles especially the main façade which is the most important indicator. Comparative analysis of architectural styles of Malaysia West Coastline station buildings is made with contemporary and historical related buildings and modern railway station buildings in terms of similarities and differences.

**Keywords:** Malaysia, railway station building, architectural styles, façade elements, plan types.

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## ÖZET

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# İNGİLİZ DÖNEMİNDE (1885-1957), MALEZYA BATI YAKASINDA YAPILAN DEMİRYOLU İSTASYON BINALARININ ARAŞTIRILMASI VE MİMARİ AÇIDAN DEĞERLENDİRİLMELERİ

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Mimarlık Tarihi ve Kurami Anabilim Dalı

Doktora Tezi

Tez Danışmanı: Prof. Dr. M. Gül AKDENİZ

Bu araştıma, Malezyanın Batı yakasındaki demiryolu istasyon binalarının belgelenmesi ile ilgili bir çalışmadır. Araştırmada istasyon binalarının plan özellikleri ve mimari üslubu üzerinde durulmuştur. Mimari üslubun değerlendirilmesi, binanın üslup özelliklerini büyük ölçüde yansıtan ön cephe üzerinden yapılmıştır. Kalay madenciliği ve kauçuk endüstrisinin gelişmesi sonucu hammadde ürünlerinin ve insanların taşınabilmesi için demiryolları geliştirilmiş ve bunun neticesinde birçok tren istasyonu yapılmıştır. Ulaşımında meydana gelen gelişmeler şehirlerin de gelişmesine yol açmış bunun neticesinde İngiliz kolonizatörler, yönetim ve belediye binaları, fen işleri müdürlüğü, mahkeme, postahane gibi gerekli olan, çoğu o güne kadar Malezyada görülmeyen birçok kamu binası yapmıştır. Söz konusu demiryolu istasyon binaları ile ilgili bilgiler katalogda yer almaktadır. Değerlendirme bölümünde Malezya demiryolu istasyon binaları ile bu binaların şekillenmesinde etkili olan İngiltere, Avrupa ve özellikle Hindistan gibi diğer komşu ülkelerdeki istasyon binaları yanında farklı fonksiyonlu binalarla da olan mimari benzerlik ve farkları üzerinde durulmuş, planları, mimari elemanları ve üslup özellikleri açısından karşılaştırılarak değerlendirilmişlerdir.

**Anahtar kelimeleri:** Malezya, demiryolu istasyonları, mimari elemanlar, üslup özellikleri, plan tipleri

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## CHAPTER 1

---

### INTRODUCTION

Before modern technology was introduced, whereby railroads and station buildings were made, people used land routes, animals and rivers for transportation to move things from one place to another. According to the physical and geographical properties of the land having a high dense of vegetation and highlands, the main mode of transportation between the Malaysian states was by the used of the rivers and seas natural highways. Land transportation was generally difficult as in the low areas much of the land was swampy whilst narrow forest tracks were frequently blocked by fallen trees, as elephant was the main beast in the inland jungle tracks, [1]. Pre-industrial transportation varied enormously with different types of animal such as elephants and vehicles such as bullock carts<sup>1</sup>, sampan<sup>2</sup>, jinrikisha<sup>3</sup> and gharry<sup>4</sup>.

Prior to industrial revolution, railways were the pioneers of modern transportation introduced by the British to Malaya during 1885. The urgency to transport the natural resources such as the tin ores resulted railway as major transportation means for distribution and people. The

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<sup>1</sup> A bullock cart defines as two or four wheels' vehicles pulled by a bullock.

<sup>2</sup>It is known as 'sampan' in Malay language, or known as boat is a flat bottomed wooden boat and often used as a traditional fishing boat. It often used in coastal areas or rivers.

<sup>3</sup> Jinrikisha is a light two wheeled hooded vehicle pulled by a man.

<sup>4</sup> Gharry is a horse-drawn cab introduced by the British.

birth of railway station buildings came along as required facility built on the trackside for urban facilities for people and goods on railway network. Howard (2012) expressed that the colonial railway station buildings were the statements of British power and control, thus expressed through their architecture and stylistic decoration [2].

## 1.1 Literature Review

The oldest source concerning the railway station building in both Europe and America written by Meeks. Meeks (1956) described and illustrated on the evolution of the architecture of the railway station buildings begins with the earliest train-sheds and follows the progress of station design to the great structures erected in 1950s. Meeks also includes the challenges in engineering especially in the construction of huge roofs in new materials [3].

Survey on the publications of the Malaysia railway station buildings found that Stanistreet (1973) wrote a book titled '*The Malayan Railway*' about his journeys through Malaya using the railway services was published by the Oakwood Press [4]. The sources of historical texts are very scarce and limited on railway station buildings. whereby there is one referred to be the best book on Malaysia railway developments called '*Sejarah Keretapi di Malaysia*' by M.A. Fawzi Basri, 1985 [5].

Stocker (1987) focused on Kuala Lumpur railway station's history and its architectural description in one of a magazine article called 'Majallah Arkitek', [6], while Musa (1989) studied on history of railway development and architectural elements, but only on selected monumental railway station buildings in his diploma thesis for Universiti Teknologi Mara, Malaysia [7].

Initiatives also being done by Federated Malay States Railways in publishing a memorial books titled '*Fifty years of railways in Malaya, 1885–1935*' and the Keretapi Tanah Melayu called

‘Malayan Railways 100 Years 1885 – 1985’, commemorating the 50 years and 100 years of railway in services.

Ahmad (1993) mentioned about four main architectural styles of the British colonial buildings in Malaysia classified as Moorish, Tudor, Neo Classical and Neo Gothic styles [8]. He stated that Kuala Lumpur Station building influences from Moorish style but did not further discuss on its characteristics as his study concerned about the process of conservation of Bangunan Sultan Abdul Samad (an administrative building).

According to Pusat Kajian Alam Bina Dunia Melayu (KALAM), various measured drawing works on some of the selected railway station buildings have been documented by architecture student in 2007-2008 with supervision from Architectural Department in Universiti Teknologi Malaysia.

Meanwhile, Sahabuddin, (2012) examined the evolution of railway station in Kuala Lumpur in his research report for “Design, Value and Architecture” subject course [9]. Furthermore, research report writing for History and Theory of Architecture subject also can be found recently by Alias, (2015) on British Influence to Federated Malay States Railway Stations which focused on identifying and evaluating the influence of British India in Kuala Lumpur and Ipoh Railway Station as the first two railway stations that have been built by brick [10]. The latest study of Surat et al. (2017), the published paper, ‘Malaysian National Architecture Identity: From The Approach of Malay Vernacular Architecture Principles’, stated that railway station buildings are of Neo Mughal and Neo Classical style. Generally, Surat only stated the classification of architectural styles of all the Malaysian public buildings [11].

As can be seen, it can be stated that most of the researchers in Malaysia focused on the history and railway system development, socio-economics, political developments, railway locomotives and services regardless on the architectural part. There are no comprehensive documentations made on Malaysian railway stations buildings of the British era, concerning

their plans, architectural styles and façade elements in depth. There are not enough old and new photographs taken enlightening or giving knowledge about these buildings. Even there are no basic catalogues of all station buildings in Malaysia being documented by any researchers thus it is an opportunity to compile all of the old station buildings whenever possible.

### **Definition of Railway Station Buildings**

Kido (2013) expressed that a railway station can be defined as a place where trains load or unload passengers usually consists of the combination of a platform and a station building or shelter or any one of it [12]. Meanwhile Shin et al. (2015) said that the railway station building is a facility built along the track used for people and goods [13].

Railway by definition is a permanent track composed of a line of parallel metal rails fixed to sleepers used for transportation of passengers and goods by trains. While, station is a place where trains stop to pick up or let off passengers or goods on railway track. It can be concluded that, railway station is a building on a railway line where trains stop to transport passengers or goods using platforms and tracks, [14].

Besides the main function of the railway station building is giving an access to the train, it also performs other variety of functions such as meeting places and urban landmarks. It can be stated that railway station building is an important public building. A study by Meeks (1956) stated that a railway station building has different requirements compared to other public buildings. The requirements are the specialized tracks with mechanical system, freight and passengers' transportations.

Theoretically, there are several types of railway station buildings such as terminal stations normally large and built in city centers, substation or suburban stations are normally small and

intermediate stations, and halts<sup>5</sup> which normally have pit stop with staff or not, with few or non-facilities. Here the train stops upon request; if there are passengers or goods to be picked up or dropped off.

Railway station building owes its birth to necessity during the industrial revolution when the production system and economy changed as a result for the requirement of purchasing a ticket at the ticket office, proceeding to the waiting area or shelter provided as the simplest form of a station building. Classification of the building types has been made which has been made according to the passengers' circulation [3].

As for the definition of a railway, most of the early historians interpreted what they already understand about the term 'railway'. According to Dr Michael J. T. Lewis (1974), the eminent scholar of early railways, it is 'a prepared track which guides the wheels of the vehicles running on it so that they cannot leave the track'. Railways that fit Lewis's definition existed as far back as 6th century BC; the Greek Diolkos was a railway with a track made from stone, 6 km in length across the Peloponnese, used for transporting specially ships started from c. 600 BC until the middle of 1<sup>st</sup> Century AD, [15]. Although the definition may vary, the principle remains the same whereby railway is a linear transportation.

## **1.2 Objective of the Thesis**

The main intent of this thesis is to gather and to document information concerning the railway station buildings on the West Coast line, Malaysia built during the British era, which ended upon the independence of Malaysia (31<sup>st</sup> August 1957). In this study, the attempts on collecting data was tried comprehensively to detect the missing railway station buildings, the ones that

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<sup>5</sup>According to Merriam-Webster Dictionary, halt can be referred as small railroad stop at which there is no station. It is also known as flag stops in United States of America.

became ruined, and the ones that have changed within time. Making analytical descriptions and evaluations of the plans and classifying them according to their types was another aim of this work. The complicated eclectic and architectural style of these station buildings having a large variety are going to be tried to be identified and described. Besides international and vernacular influences on these station buildings will be searched and try to be revealed. The information and knowledge gathered for each building were arranged systematically and placed in the catalogue. Later from this catalogue for better analysis of the plans, architectural features and styles were tried to be classified. After the catalogues of railway station buildings is made, comparative analysis of railway station buildings of Malaysia is made with the railway station buildings all around the world and vernacular architecture. The similarities and differences will be unveiled.

### **1.3 Original Contributions**

This research will be generated from the data obtained from primary and secondary data.

### **Research Methodologies**

#### *Archive Studies*

These include sessional papers and annual reports of Federated Malay States (FMS), Federated Malay States Railways (FMSR), and Malayan Railways Administration, and working papers from various archives, and libraries that have been visited to make and find any information regarding railway station buildings in Malaysia specifically concerning the West Coastline.

Arkib Negara Malaysia (Malaysia National Archives) have been visited for the primary data. Data such as the annual reports of Federated Malay State Railways and Malayan Railways are found here. Pusat Kajian Alam Melayu (KALAM) in Universiti Teknologi Malaysia, Johor



Bahru was the main source for the surveyed drawings on railway station buildings drawn by their architecture students under the supervision of Architecture Department. Visits to the Keretapi Tanah Melayu Berhad (former Federated Malay States Railways) also being made prior to work regarding this study, but turn out to be of no avail. After several visits to the Museum Department of the Keretapi Tanah Melayu Berhad, the responsible officer offered not much help and no documents concerned could be found except only several old photographs and a recent drawn railway map dated 2015. Though he did the checking on the station buildings listed on the catalogue, making sure that the station buildings are right. Information on the British architect, A.B. Hubback were obtained from Pertubuhan Arkitek Malaysia (National Board of Architect Malaysia) and Centre for Modern Architecture Studies in Southeast Asia (MASSA), School of Architecture, Building and Design (SABD), Taylors' College.

Other archive inspected is the National Archives in England. In this archive, all of the important data regarding the British Malaya falls in the Colonial Office Section and some of the cartographic images can be seen in the Straits Settlements Section. The main focus was to find any building plans on the railway station buildings concerning the British Malaya but none could be found. The British Library in England also has been visited for information regarding this study. Contacts have been made via email with The British Overseas Railways Historical Trust to visit their library in Greenwich but it was not recommended by them as they have the same information held by the British Library and the responsible person in charge, the chairman himself, Dr. Paul E Waters remarked that there could not be any useful information regarding architecture as more information are more on train locomotives.

### *Field Observations*

Photographs were taken on site of each station building along the West Coastline during the road tours beginning from Padang Besar, Perlis and ending in Tanjong Pagar, Singapore. Road tours have been divided into two parts, firstly to the upper northern part of the Peninsula Malaysia and secondly to the southern part of the Malaysian Peninsula up to Singapore. Not all of them could be detected on their original sites. Some of the station's sites were changed or some of them have become a part of the forest, paddy fields and rubber fields. Meanwhile others were engulfed in the city as a result of the urban developments. Some of the railroad tracks were changed and then accordingly the station buildings had changed. It was a challenging task to find out the old station buildings which did not have any proper signage, abandoned and already torn down.

### **Thesis content**

This thesis is divided into five chapters whereby the first chapter is the introduction of the definition of railway station buildings and railways, literature review, the intent of the thesis and research methodologies are described.

The second chapter comprises two parts; first part describes on Malaysia's geographical location and historical background before and during the western colonial periods. The western colonials have Malaya, starting with the Portuguese (1511 – 1641), continuing with the Dutch (1641 – 1824) and ending with the British period (1824 – 1957). A brief explanation on migration of Chinese and Indian people during the British era also included. Meanwhile the second part describes the history of railway station buildings all over the world as the

preliminary examples. The study begins with the first station building constructed, 1825 in Great Britain up to 1885, before the railway station buildings being constructed in Malaysia.

Chapter Three is the catalogue chapter. The railway station buildings are arranged according to the year built, starting with the oldest station built in 1885, the last being built in the year 1932. Each catalogue includes station name, the year it was built or opened, the architect's name, building address, catalogue number, photographs lined up according to the year, stations' history, building descriptions, plans, main facades details etc. Survey drawings, old photographs and update photographs of the building are placed in the catalogue.

Chapter Four is the evaluation and conclusion part. Evaluation and descriptions of the Malaysian station buildings is made. First of all, classifications of the plan are made. Then, roof types and train-sheds are described and classified. Later, the façade elements are classified and described in descending orders beginning with roofs, domes, columns, towers, pinnacles and finials, arches, doors, windows, parapets and balustrades are viewed and analyzed. The main building facade (entrance façade) is the main subject of treatment as it is the distinctive element defining the stylistic attitude of nearly the whole building. Here is shown the significance of the historical Malaysian railway station buildings and the need to preserve them. How many of them have demolished, how many of them have been restored, how many have been made for 2 and 3 times, the one that have changed place and how many still in operation. The political, geographical, social and economic international and national interactions and their effects on the developments on Malaysian Colonial period railway station buildings.

## CHAPTER 2

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### GENERAL INFORMATION

Malaysia has been colonised by three foreign countries, the Portuguese, the Dutch and lastly by the British. Colonial architecture is still dominant in most major cities, Melaka, George Town in Penang, Kuala Lumpur, Ipoh and Taiping in Perak, and Johor Bahru. Portuguese architecture can be seen in Melaka for examples, the A' Famosa (1511) and St. Pauls Church (1590) but it has been demolished during Dutch occupation. Meanwhile two Dutch buildings still remained intact; the administrative building of Stadhuys and Christ Church, in Malacca. The Stadthuys is now a History and Ethnography Museum.

#### **2.1 Location and Historical Background of Malaysia**

Geographically, Malaysia is located in the heart of South East Asia. The Malay Peninsula appears as a north-south maritime stopover between the maritime complex of the Indian Ocean and the Pacific Ocean; that is to say takes place on one side, India and China on the other [16].

Malaysia consists of two regions, the Peninsular of Malaysia and the island named West Malaysia, (Figure 2.1). These two regions are separated by the South China Sea. It consists of 13 states and three federal territories. The capital city of Malaysia is Kuala Lumpur. Now,

Malaysia practices federal parliamentary elective and constitutional monarchy whereby, the Prime Minister is the head of the government and the King is the Head of Supreme State.

Malaysia falls under the tropical climate country with heavy rainfall and warm sunshine received throughout the year which creates lush dense jungle on the uplands leading down to mangrove swamps along much of the coast and river margins. According to the Statistic Department in 2016, the population of Malaysia is 31.7 million with 89.7 percent Malaysian citizens and 10.3 percent non-citizens. Malaysian citizens consist of different ethnic groups, Bumiputera 68.6% (Malay and native) as the highest population followed by the Chinese 23.4%, Indian 7.0% and others 10%.



Figure 2.1 Map of Malaysia showing its 13 states [17]

Federation of Malaya<sup>6</sup> achieved its independence on 31 August 1957 which includes Malay Peninsula, Sabah, Sarawak and Singapore. Then, on 16 September 1963, Malaysia was formed and in 1965, Singapore was separated from Malaysia and become independent due to political circumstances.

The Malay Kingdom started as early as extensive international trade began with many different Asian peoples and regions (the Chinese, Indian and Middle East). Numerous ports were made from one coast to the others for the merchants.

One of the earliest Malay-Indian Kingdoms mentioned in the Chinese Annals was the Kingdom of Langkasuka which is located on the Malay Peninsula, and more precisely on the two shores of the Isthmus of Kra [18].

The most important state to emerge after Funan was the Indianized maritime empire of Sri Vijaya, (1225 to 1270), near Palembang. It is important because of the introduction of Indian religion, art and literature. By the 9th century, Sri Vijaya had imposed its rule over 15 vessel states and principalities of the region. Kadaram, in the southern part of Kedah state in West Malaysia, was a key point in Sri Vijaya's empire, as the northern port of the Malacca Straits [18]. Numerous Hindu and Buddhist temples, particularly in the Bujang Valley, show that it continued to be an important trading centre for many centuries.

By the beginning of the 14th century, Sri Vijaya's authority and prominence in the east-west trade was on the wane. In the adjoining island of Java, another Malay empire was on the rise. This new kingdom was known as the Empire of Majapahit. The Majapahit Empire was an Indianized kingdom based in eastern Java from 1293 to around 1500. Its greatest ruler was

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<sup>6</sup>Malaya, the name has been used until they achieved independence and restructured as Federation of Malaya on 31<sup>st</sup> August 1957. It became fully known as Malaysia when Malaya united with North Borneo, Sarawak and Singapore on 16<sup>th</sup> September 1963. In 9 August 1965, Singapore was separated from Malaysia.

Hayam Wuruk, (reign 1350 – 1389) marked the empire's peak when it dominated other kingdoms in the southern Malay Peninsula, Borneo, Sumatra, Bali and the Philippines. The Majapahit Empire was the last of the major Hindu empires of the Malay Archipelago<sup>7</sup>.

## **Melaka Reign**

Before the arrival of the first Malay Sultan, Melaka<sup>8</sup> was a fishing village inhabited by local Malays. Melaka was founded by Parameswara, also known as Iskandar Shah who fled to Temasik from the attacked of Kingdom of Majapahit. He found his way to Melaka around 1400 where he found a good port as it was accessible in all seasons on the strategically located narrowest point of the Malacca Straits. In collaboration with allies from the sea-people<sup>9</sup>, he established Malacca as an international port by compelling passing ships to call there, and establishing fair and reliable facilities for warehousing and trade.

During 1400's many early residential areas were built along the waterfront at Melaka River with trading activities concentrating on the western banks close to estuary. The Melaka river mouth played an important role in the evolution of the city where earlier settlements appeared.

With its strategically located deep harbour and sheltered river mouth on the Straits of Malacca that enabled to establish control over the exchange and distribution of trade goods carried

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<sup>7</sup>Malay Archipelago or also known as Kepulauan Melayu, situated between the Indian and Pacific Oceans, the largest archipelago by area exceeding 2 million km and more than 25,000 islands of the archipelago. It also includes Brunei, Singapore, East Malaysia, Indonesia, the Phillipines and East Timor. The term 'Malay' was derived from the concept of a Malay race, referred to people who inhabited the land by European naturalist, Alfred Wallace.

<sup>8</sup>According to a popular legend, Parameswara was resting under a tree near a river during a hunt, when one of his dogs cornered a mouse deer. The mouse deer pushed the dog into the river. Impressed by the courage of the deer, and taking it as a propitious omen of the weak overcoming the powerful, Parameswara decided then and there to found an empire on that very spot. He named it 'Melaka' after the tree where he had just taken shelter at, the Melaka tree.

<sup>9</sup>Sea-people known as Orang Laut in Malay language, are a group of Malay people living on coastal islands of Andaman Archipelago, Peninsular Malaysia, Riau Archipelago and Singapore.

during the season of north-east and south-west monsoon winds, Melaka's economy was founded on goods<sup>10</sup> collected from neighbouring and far away countries [19].

The port provided warehouse facilities, a bazaar, ship provisions and a Malay-run ship building and repair industry; it also developed a maritime military capacity to control seaways and traffic in Melaka [20]. Its historical importance and its allure to traders, merchants, missionaries and adventurers from far-flung places showed Melaka's significance: for them Melaka was 'one of the most famous trading emporia that the world has known, its fabled wealth a byword from Lisboa to Peking'. Over the thousands of miles of river, sea and ocean on which valuable Oriental spices were carried, the Straits of Malacca was the only waterway on these trade routes which enabled 'a virtual monopoly' of that lucrative commerce to be established and sustained [21].

Early 15<sup>th</sup> Century, it had become a wealthy and powerful hub of maritime trade – low tax regimes and equal opportunities to Indians, Arabs and Chinese merchants lead to rapid development in Melaka. Silk and porcelain from China, textiles from Gujarat and Coromandel in India, pepper from Malabar Coast and Sumatra, nutmeg, mace and clove from the Moluccas Spice Islands were shipped to and fro in hundreds of holds. The Malay Peninsula had trading contacts with China for many centuries. After the fall of the Melaka Sultanate, Chinese traders still continued to come to Melaka.

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<sup>10</sup>From Asia came tin, gold, diamonds, pearls, spices, silks, bird feathers, aromatic woods and other tropical forest produce, natural medicinal items, aphrodisiacs, rice, salt, tobacco, tea and many other items in exchange for weapons, metal ware, cotton cloths, glassware, perfumes, opium, dyestuffs and other manufactured goods.



## **Portuguese Period (1511-1641)**

The news of Melaka's wealth attracted the attention of Manuel I, King of Portugal and he sent Admiral Diogo Lopes de Sequeira<sup>11</sup> to find Melaka, to make a trade compact with its ruler, Sultan Mahmud as Portugal's representative of east of India.

Sultan Mahmud subsequently captured several of his men, killed others and attempted to attack the four Portuguese ship, although they escaped. As the Portuguese had founded that the conquest of Malacca would be the only way they could establish themselves in Melaka. In April 1511, Alfonso de Albuquerque set sail from Goa to Melaka with a force of some 1200 men and seventeen or eighteen ships. After 40 days of fighting, Melaka fell to the Portuguese on 24 August 1511. Following the defeat of the Melaka Sultanate in 15 August 1511 in the capture of Melaka, Afonso de Albuquerque<sup>12</sup> sought to erect a permanent form of fortification known as A'Famosa or The Famous<sup>13</sup> (Figure 2.2 & 2.3).

The fortress was designed and constructed encompassing a hill, lining the edge of the sea shore, on the south east of the river mouth, on the former site of the Sultan's palace. Albuquerque remained in Melaka until November 1511 preparing its defences against any Malay counterattack. Sultan Mahmud Shah was forced to flee Melaka.

Irwin says 'With a disregard for Muslim susceptibilities typical of the time, the Christian Portuguese erected their fortress on the ruins of the Great Mosque of Melaka and constructed

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<sup>11</sup> The first European to reach Malacca and Southeast Asia, Sequeira arrived in Malacca in 1509. He was sent by the King to analyze the trade potential in Madagascar and Melaka. He left Melaka when he discovered an assault of assassination by the Sultan of Melaka, Sultan Mahmud Shah towards him which gave the opportunity to Alfonso de Albuquerque to embark upon his conquest.

<sup>12</sup> Born in 1453, Alhandra Lisbon. He was a Governor of Portuguese India from 1509 till 1515. He was the first European who established a Portuguese Asian empire securing the trade of spices, spreading the Christianity and combating Islam.

<sup>13</sup> Under the Portuguese, Melaka was transformed into a walled city defended with firearms. It was a military complex with a five-storey keep (A Famosa), a residence for commander, a governor's palace, bishop's palace, five churches including a cathedral, administration buildings, two wells, two schools, and a convent of religious orders, two hospitals, a prison, also a council chambers. All was surrounded by a massive wall nearly a mile long (Seouw, 1983 and Hoyt, 1993).



The 'A Famosa' indicates to be square in plan with walls eight feet thick with many bastions and cuirasses. Although Melaka was already well known during the Malay Sultanate, under the domination of the Portuguese it became the centre between two commercial worlds; the countries of the Indian Ocean and the Far East.

Based on Maps and Texts of Eredia<sup>14</sup> (1613), the development of Melaka was more on the eastern side of the river where buildings, streets and squares were built according to Portugal's urban traditions. The map below (Figure 2.4) shows that the western side of the river was marked as suburb, Java bazaar, a church and villages, kampong in Malay language of several ethnic groups.

The villages including Campon Chelin (Kampong Kling) was occupied by the Hindu Indians who had close ties with the Portuguese as noted by Ismail (2012) and Lim et al (2006). During Portuguese era, there are a number of buildings built but only few remnants are left after the Dutch invasion of Melaka (1641).

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<sup>14</sup> The cartographer who drew the map was Manuel Godinho de Eredia (1563-1623). Eredia was of Eurasian ancestry and was born in Melaka, the son of a Portuguese official and Bugis aristocrat. He was the royal cosmographer to the Spanish crown and a noted cartographer and astronomer. He included the map in a manuscript that he wrote in Portuguese in 1613 titled *Declaracam de Malaca e India Meridional com o Cathay*.

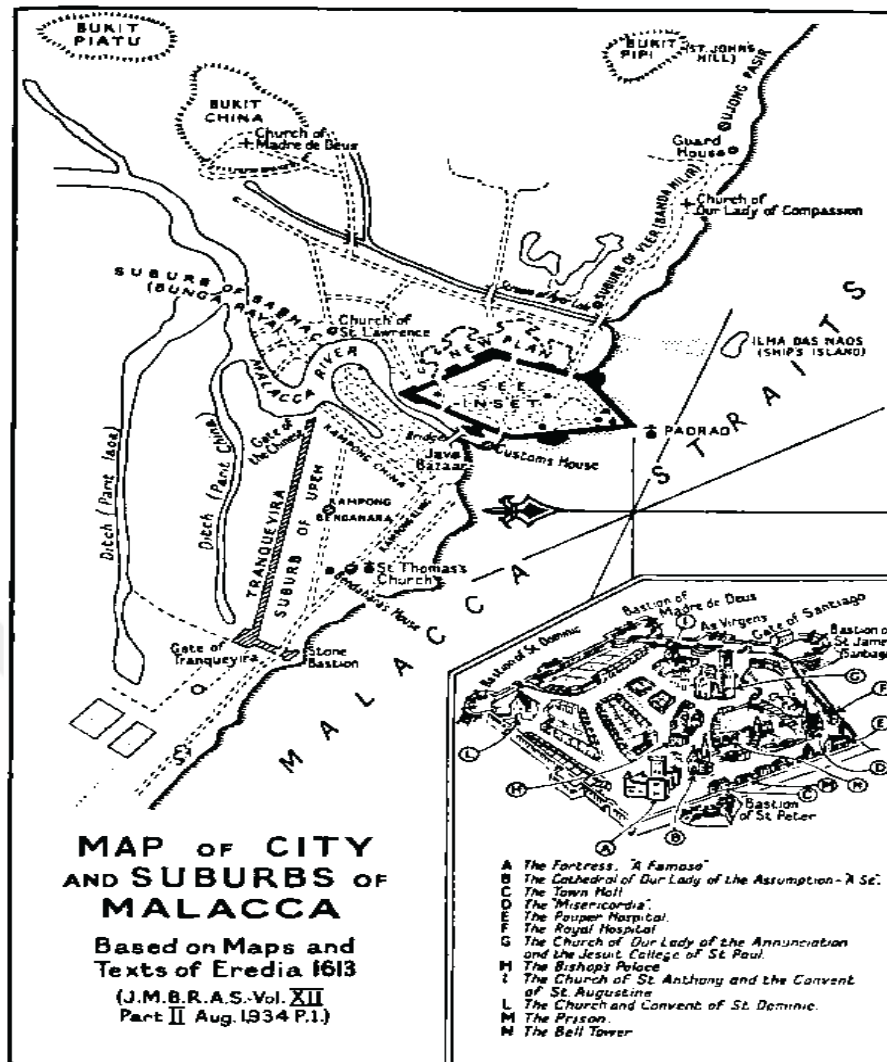


Figure 2.4 Map of City and Suburbs of Malacca [24]

### Dutch Period (1641-1824)

After the Dutch invasion of Melaka many new developments took place inside and outside the fortress. Early Dutch expeditions ranged widely around Sumatra, Java, Borneo and Celebes. For the next century and a half, the Dutch endeavoured to maintain an economic monopoly along the coasts of Malaya.

The morphology of Melaka also showed close similarities with other Dutch port-towns having an administrative building centre, the Stadhuis, a main street and a canal built across the town

and a special area for civil residents. The town centre also had a square as a meeting place for the inhabitants, as in other Dutch cities.

There is little historical documentation about the fortress during the Dutch occupation. But there is a drawing of the town and fortress (A Famosa) by Johann Heydt<sup>15</sup>, which shows a vague plan of the fortress without detailed descriptions of the urban form showing a clear delineation of street networks and land parcellations (Figure 2.5). The Dutch could have adopted the existing street patterns laid down by the Portuguese. But they made minor adjustments, particularly in the dimensions of the lots. The land seems to be deeper and narrower on the northern commercial area of the town (Figure 2.6). During the Dutch occupation the wealthier Dutch settlers took over the area west of Malacca River and erected their brick houses in the area noted as Kampong Kling which was the best part of the colonial town with a good view of the sea [25].

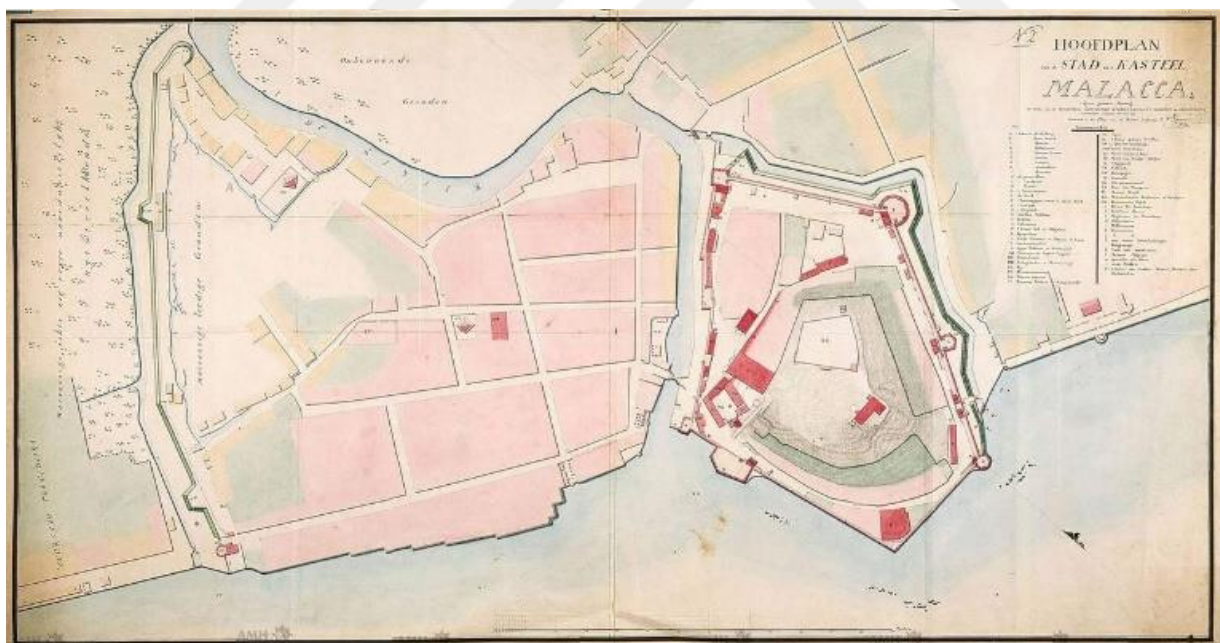


Figure 2.5 Malacca in 1744 by Johann Heydt [22]

<sup>15</sup>Johann Wolfgrand Heydt, of German origin was an engraver, architect and surveyor hired by the Dutch East India Company in the early 1730's. He was stationed in the company's outpost around Asia such as Ceylon (Sri Lanka), and Batavia (Jakarta, Indonesia). He produced 41 engravings of different places in and around Batavia in the order of the Governor, General Valckenier. He returned to his country in 1741 after resigned from the company due to his health.



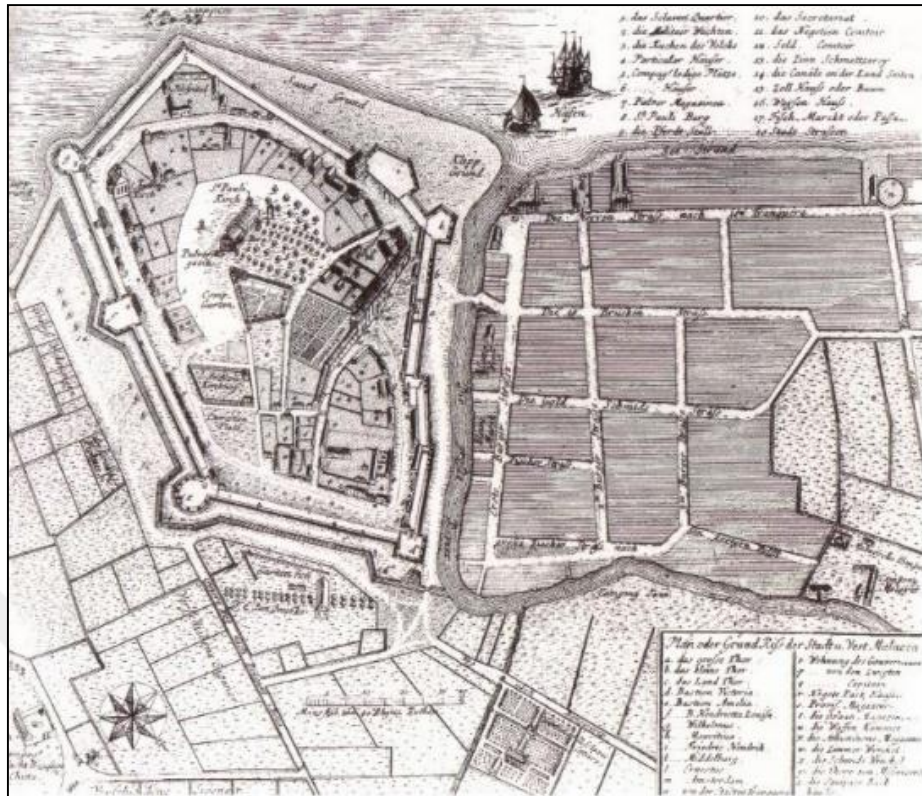


Figure 2.6 Malacca during the Dutch era [22]

### British Period (1824-1957)

Although the Portuguese and the Dutch occupied the Straits of Malacca earlier, Britain was the sole European power in the Malay Peninsula at the end of the eighteenth century, [26]. The first contact of the English with the Malay Peninsula took place in 1786 when Captain Francis Light founded the town Penang, in order to meet the English East India Company's<sup>16</sup> (EEIC) need for a port at which to replenish and refit its ship on the China trade route [1]. This EEIC increased its possessions and the territories over which it held treaty rights until its power

<sup>16</sup> English East India Company was established by royal charter as a joint-stock company in 1600 with exclusive rights to trade between England and Asia. Its aim in the 17th century was to partake in the lucrative spice trade of the East Indies (present-day Indonesia), but it was outmaneuvered by the Vereenigde Oost-Indische Compagnie (VOC; [Dutch] United East India Company). The EEIC withdrew to India, leaving a lone outpost of Benkulen (Bencoolen, Bengkulu) on the western Sumatran coast, but returned to Southeast Asia in the late 18th century as a result of Anglo-French rivalry in the subcontinent and the increasingly profitable "China trade" in luxuries (tea, silk, porcelain).

extended from Aden in Arabia to Penang in Malaya, both vital ports of call for company vessels playing between Britain, India, and China (Hlávková and Tichá).

Under the *Anglo-Dutch Treaty*<sup>17</sup> in 1824, Malacca came permanently under British rule. Penang (1786), Province Wellesley (1800), Singapore (1819), Melaka (1824) and Dinding (1826) all amalgamated to form *the Straits Settlements* [27]. Later the EEIC political power was ended by the Indian Mutiny 1857 resulted in the Crown taking over the government of India 1858. The Straits Settlements were controlled by the British Colonial Office in London in 1867, when they became a Crown colony.

In 1874, the *British Colonial Office* reversed its policy for not intervening in the affairs of the Malay states, but appointed to Perak, Selangor and Sungei Ujong (part of N. Sembilan) a *British Resident* to manage all matters concerning domestic issues other than the Malay customs and religion matters. The states with British Resident were bound to follow their advices. Pahang and the remaining of N. Sembilan were later incorporated in this system, four states known as *the Federated Malay States*. In 1909, a British treaty with Siam ceded to British Siam's rights and powers over the northern states of Perlis, Kedah, Kelantan and Terengganu. These four northern states came under British rule as protected states. In 1914, Johore also came under British control and these five states were collectively called the *Unfederated Malay States* and each state was allotted a *British Advisor* (Figure 2.7).

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<sup>17</sup> The Anglo-Dutch Treaty of 1824 was a treaty signed between the United Kingdom and the Netherlands in London on 23 March 1824. In order to resolve the issues arisen due to the British occupation of Dutch properties also the rights of trade that existed for hundreds of years in the Spice Islands between the two nations. During the final negotiations, the Dutch agreed to exchange north of the Straits of Malacca and its Indian colonies with south of the straits, Bencoolen.



Figure 2.7 The Peninsula under the British rule drawn in 1909 [28]

Malaysia holds a wide range of mineral resources such as tin, gold, coal, copper, magnesium, phosphate, iron ore, and bauxite. But, only tin, gold, and iron have been commercially exploited by the westerners mainly the British. Tin was the most celebrated mineral that significantly impacted demography, migration, infrastructure development, and urbanization. Between the 1880s and mid-1980s, Peninsula Malaysia was the world's largest producer and exporter of tin ([27], [29]). Kinta Valley in Perak, Klang Valler in Selangor, and Sungei Ujong in Negeri



Sembilan on the western part of the peninsula were major tin mining areas where tin was produced.

The Chinese migration to the Malay Peninsula started when they were first attracted to Penang and Singapore as it was free trading ports which offered prosperities in new areas and territories. They worked as labourers and craftsmen when they first settled in these two islands. The populations of Chinese increased rapidly in Penang and Singapore as the Malay government did not seem to interfere with their activities as well as provided with protection for their goods and possession, adequate accommodation and encouragement for trade, [30].

The tin mining industry were first discovered in Larut, Perak by Long Ja'afar in the year 1848 and he started the development of the tin mining industry. Long Ja'afar employed Chinese miners to mine his land and later become an encouragement to other Chinese merchants to invest in the mines industry. Even though the mining methods were primitive, later the richer deposits area were found in Kinta, Perak and also in Selangor [29].

During the Industrial Revolution, a great demand on rapidly expanding tin-plate industry to Europe resulted on a great influx of Chinese immigrants known as coolies, in order to provide required labour for mines operation to fulfil the supply of tin ores. The mines, mills and docks were flooded with Chinese immigrant workers from Southern China.

During the 1840s and 1850s, the European investors also wanted to seize the opportunity by investing money and better technology in the tin industry. They established a partnership with Chinese entrepreneurs in tin industry of the Western Malay States to get more profit in lesser time.

The British always saw their colonies as a profit in boosting the economics for other British stakeholders unlike other colonial powers. Despite its tin mines, British planters began to experiment with tropical plantation crops such as tapioca, gambier, pepper and coffee. In 1870s, the rubber plant was introduced from Brazil, and rubber soon became Malaya's staple

export, stimulated by booming demand from European industry [31]. A large and disciplined labour force for plantations were required, the British fill this positions with immigrants from South Indian especially Tamil and Telugu as their wages rates were lower and worked well under supervision.

A large-scale Indian migration and permanent settlement commenced in the 19<sup>th</sup> century. Indian convicts and laborers were transported in the early part of the century to the Straits Settlements to undertake public infrastructure works; indentured labor was recruited for the sugar industry of Province Wellesley. In the late 19th century, thousands of Indian laborers were procured for jungle clearance for large-scale commercial agriculture (tea, coffee, coconut, and rubber), railroad and road construction, while hundreds served as dockworkers at the ports of Penang and Singapore. The British colonial bureaucracy, Western agency houses, banks, shipping, and insurance firms engaged English-educated Sri Lankan Tamils and Sinhalese as clerical and sub managerial staff [27].

Malaysia's multiracial society was largely a consequence of the tin industry. Railroads were designed and built to ensure the efficient transport of tin ore from source to processing plant and port for export. Railroad networks was the most developed on the western part along the tin belt of Peninsula Malaysia.

## **2.2 History of the World Railway Station Buildings**

Railway transportation was introduced as an urgency to support mining industry in transporting tin ores. Works such as Agricola's *De Re Metallica*<sup>18</sup> on his book about the nature of metals and mining, date the extensive use of railways with wooden rails and vehicles up to around the

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<sup>18</sup> *De Re Metallica* is a book by Georgius Agricola or the original name is George Bauer. The book was published in 1556 mainly on mining, refining, and smelting metals. Its remained as the main texts on mining for 180 years after its publication.

15th century. Although of great technical interest, individual systems had short lives and were of no significance as anything other than being adjuncts to the mining industries. By the 18th century, however, wooden railways began to be used for larger loads and more diverse purposes [15].

This chapter will commentate on the history of the oldest railway station buildings in the world. Generally, when the railway lines were being built, they would also take into account the signaling and technical department, a terminal or station building to load or unload the passengers and freights in order to fulfill the needs of a station building.

The existence of railway transportation becomes more significant when the city started to bloom and the British started to build in the surrounding area with more significant and grandeur having different functions, administrative buildings, town and city halls, railway stations, public works department, courts, and post offices. It can be said that transportation runs the same pace with the city developments.

Furthermore, the railway station buildings mentioned were the first railway station buildings made around the world (Map 2.9), before the birth of the first railway station building in Malaysia, in 1885.

During the early eras of railways after the industrial revolution, there was no direct precedent with respect to either their functions of railway stations. The basic requirements were the ticket office, the waiting area and the tracks which are parallel to the building. There were no specific requirements concerning the railway station, for the floor plan developed from the need and circulations of passengers, goods and the train safely and efficiently.

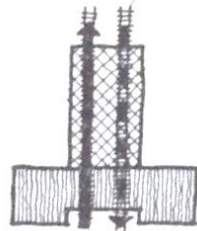
In 1846, according to Cesar Daly, editor of the *Revue Generale de l'Architecture* found that there were only four station types (Figure 2.8) arranged according to their basic circulation

routes for departing and arriving passengers; (1) one – sided, passenger route takes place on one side of the track, (2) two – sided or twin type, arriving and departing routes for passengers in building, (3) head type station building, allowing both arriving and departing passengers coming across each other and mixing on one platform and (4) ‘L’ type station building, passenger arrive at the end of the track and depart at the other side or vice versa, [3].

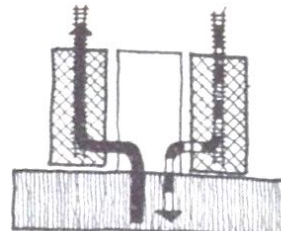


Head Type

A. EARLY TYPES OF STATION PLAN

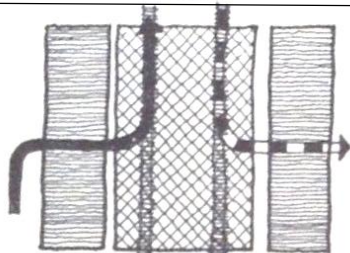


1 HEAD TYPE WITH SHED, BRIGHTON 1841



1A, "T" PLAN, TWO SHEDS VERSAILLES, 1838

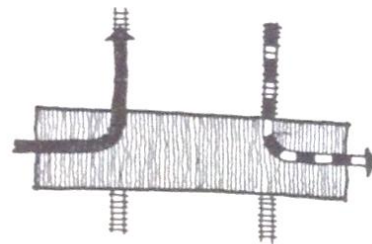
Two-sided



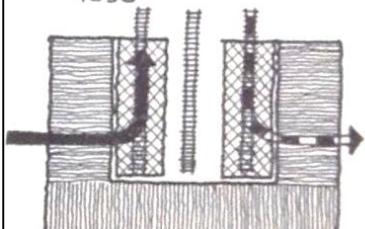
2. TWO SIDED WITH SHED LIME ST., LIVERPOOL 1836



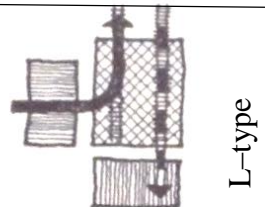
2A. TWO SIDED SHED AND STATION IN ONE, SYRACUSE, 1839



2B. TWO SIDED BRIDGE CONCOURSE, NO SHED PARIS, 1837

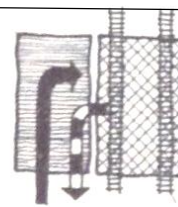


2C TWO SIDED "U" OR "STIRRUP" TYPE WITH TWO SHEDS PECQ, 1837



3. TWO SIDED "L" WITH SHED BERLIN, 1838

L-type

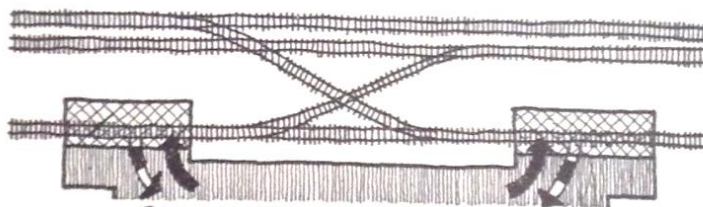


4. ONE SIDED COMBINATION WITH SHED, CROWN ST. LIVERPOOL, 1830

One-sided



4A. ONE SIDE NO SHED



5. BRUNEL TYPE

PLAN KEY

TRACKS



DEPARTING PASSENGERS



ARRIVING PASSENGERS

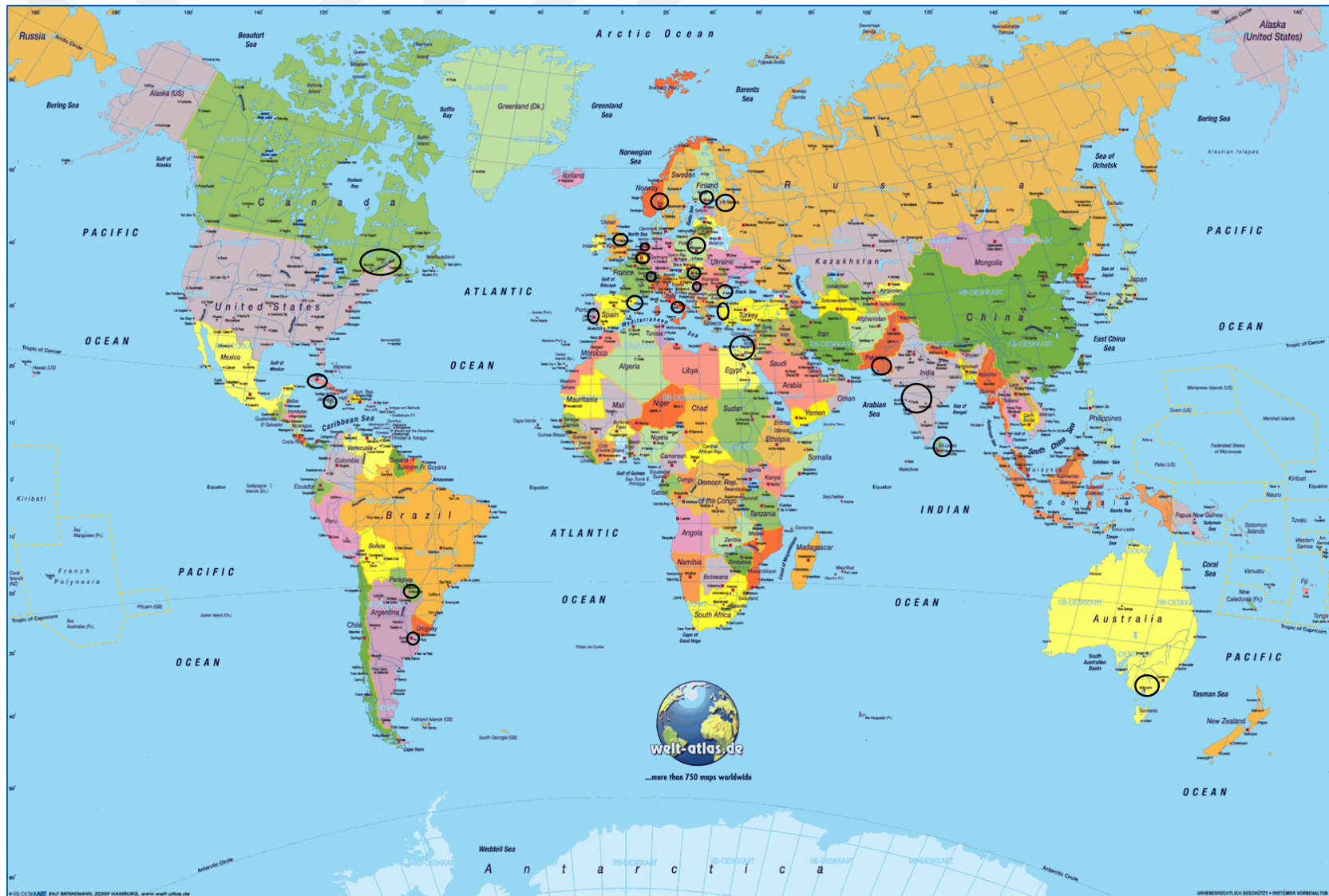


STATION



SHED

Figure 2.8 Rearranged diagram of classification for four station types according to passengers' circulation benefited from Meeks, 1956 [3]



Map 2.9 The map showing the first railway station buildings built around the world before the year 1885 [32]

The first railways started when Stockton and Darlington Railway (1825) in Britain was made, no provision were made for railways' passengers without any station building. In 1830, a ticket office (Figure 2.10) was built in Stockton which resembles a toll house<sup>19</sup> long associated with water canals and toll-roads<sup>20</sup>. Later after 1830, the first station building in Stockton was built in the form of a timber coach shed as the passenger shelter.

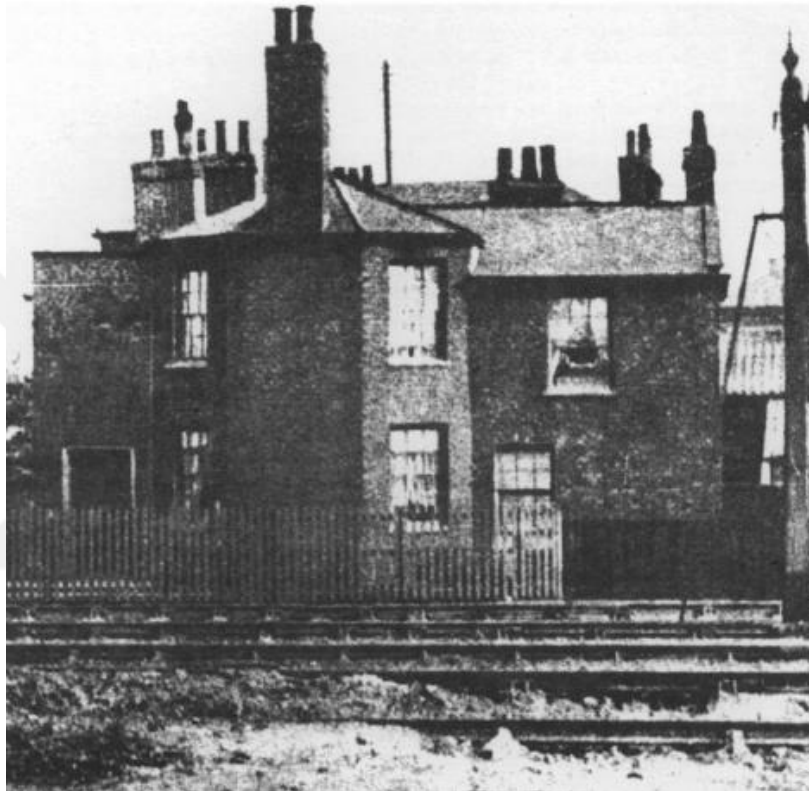


Figure 2.10 The ticket office at Stockton [33]

15<sup>th</sup> September 1830 marked the opening of the Liverpool – Manchester Railway with the length of 35 miles, the first railway to rely exclusively on steam hauled train for both, goods and passengers. It was the first railway to be fully operated without the help of animals. Most historians agree that with the opening of the Liverpool and Manchester Railway in the north-

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<sup>19</sup> Toll house is a small house at a tollgate, where the person who collects the money also lives there (Cambridge Dictionary, <https://dictionary.cambridge.org/>, retrieved 20.1.2018)

<sup>20</sup> Toll-road is a a road for which a toll is levied on people who want to travel on it (Collins English Dictionary, retrieved 28.1.2018)



west of England. In 1830, the prototype of the “modern railway” had arrived: the combination of a specialized track, the accommodation of public traffic, the conveyance of passengers as well as freights, mechanical traction, and some measure of public control [15]. The Liverpool Crown Street Station (Figure 2.11, Figure 2.12), that was built at that time was demolished in 1836 and it was moved to the new place and it was called, the Lime Street Station designed by Cunningham and Holme. It was opened in August 1836 and until now it serves as the main station in Liverpool. While the Old Manchester Station known as Liverpool Road Station was closed in 1975 and preserved as part of Museum of Science and Industry. Furthermore, the spread of Industrial Revolution leads to the extensive development of railway transportation not only in Britain, also in other countries.

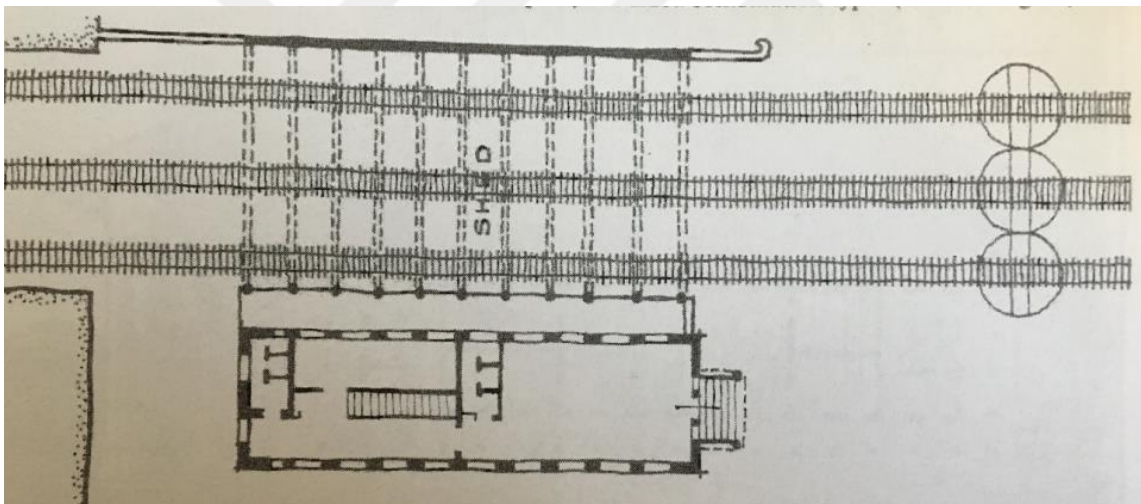


Figure 2.11 The plan of Liverpool Crown Street station [3]

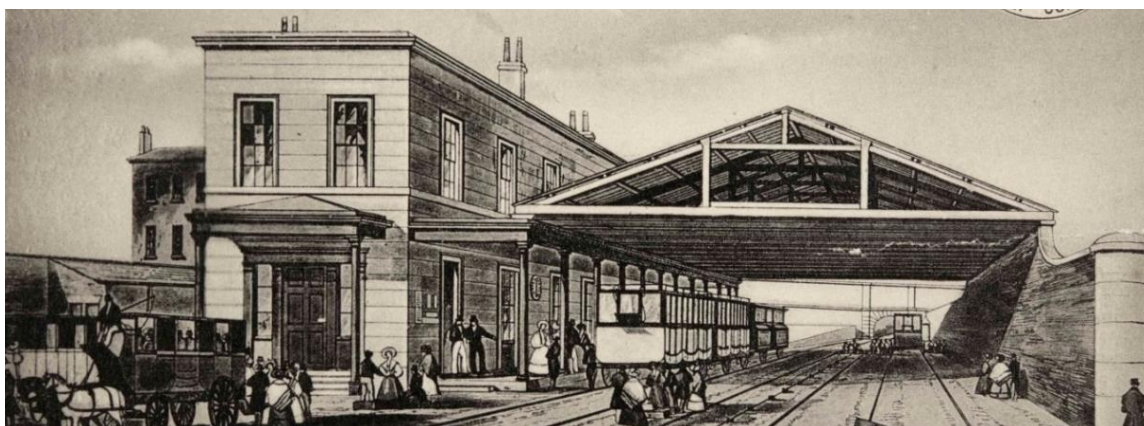


Figure 2.12 The Crown Street station of Liverpool during its early years [34]



In United States, construction of railways started in the year 1928. Years after the entrepreneurs were planning to build the Baltimore & Ohio Railroad in 1927. The steam railway came later in 1832 when the American changed the ‘heavy’ British locomotives into the ‘American’ prototype locomotive with a four-wheeled bogie under the forward end of the boiler, spreading the weight over more wheels [35]. 380 miles of railway tracks were constructed, section by section, linking 13 states and by 24<sup>th</sup> December 1852, it reached the Ohio River. The Mount Clare Station was built of brick having a polygonal shape without a train-shed and porch [3].

The railways’ influence was not only felt in countries that first industrialized, but it also felt beyond Europe and United States. After Great Britain, Belgium was the second country in Europe which involved in railway transportation. A planned railway system was achieved in Europe, under the guidance of Leopold I [35]. Brussels – Mechelen was the first railway line to open in Belgium on 5<sup>th</sup> May 1835. Both old stations have demolished. Mechelen station (Figure 2.13) have been demolished and replaced with the new station (Figure 2.14). The old Brussels Station was replaced by the new, Antwerp Central Station (Figure 2.15) in 1905, which serves as the main station building of the city of Antwerp.



Figure 2.13 The Mechelen railway station building in 1835 [36]



Figure 2.14: The new Mechelen station building [37]



Figure 2.15 Antwerp Central Station opened in 1905 [38]

The history of German railway transportations began with the opening of Bavarian Ludwig Railway between Nuremberg and Furth on 7<sup>th</sup> of December, the same year (1835) as Belgium. During the year 1952, Nuremberg Station was demolished to give way for the construction of

a multi-storey building. Meanwhile, the Furth Station was torn down to make room for the Nazi party parade ground, 'Furth Liberty' in the year 1938.

The urge of transferring coal from the mining area to the seaport, resulted in the first (21 July 1836) Canadian railway roads, Champlain and St Lawrence Railroad, running through La Prairie and St. Jean Stations.

Cuba made their railway lines before Spain. While in Cuba, the first railway transportation was built for a different sector, to transport sugar canes rather than ore transportation. The first railway connects Havana to Bejucal Station having a length of 27.5 kilometers in the 19<sup>th</sup> September 1837.

Railway constructions began during the Russian Empire, the first railway built between Tsarskoye Selo and St.Petersburg, in October 1837. It was 17 kilometers long, which was said to connect the Imperial Palace at Tsarskoye Selo to St. Petersburg Station.

This blooming railway transportation industry also influenced the Dutch to build railways in order to be competitive with the neighbouring countries. On 20 September 1839, Netherlands opened its first railway lines between Amsterdam and Haarlem, 16 kilometers long. The old Amsterdam Station was replaced by the Amsterdam Central Station in the year 1889. Same goes to the first wooden Haarlem Station which was later rebuilt in 1906-1908.

Kingdom of the Two Sicilies, the 7.64 kilometers long railway line was opened between Naples and Portici Station in October 1839.

Meanwhile in August 1842, the Prussian Government, in Poland the Upper Silesian Railway Company, opened the first two sections of the main line. The first section was opened on 22<sup>nd</sup> May connecting Wroclaw to Olawa, the second section connected Olawa to Brzeg.

Railway constructions also began in the European colonies and the South American republics. On 21<sup>st</sup> November 1845, Jamaica was the second state bounded to the British which received a railway system after Canada (between Champlain and St Lawrence lines). It was built to cater the sugar between Kingston Station and the Spanish Town Station which was 19 km. long.

In Hungary, the first railway line was opened in 15<sup>th</sup> July 1846 between the Pest and Vac Stations.

The expansion of railway construction reached Switzerland in 1847. The internal railway line was opened in the north side of the country, 16 kilometers long connecting Zurich Main Station to Baden Station.

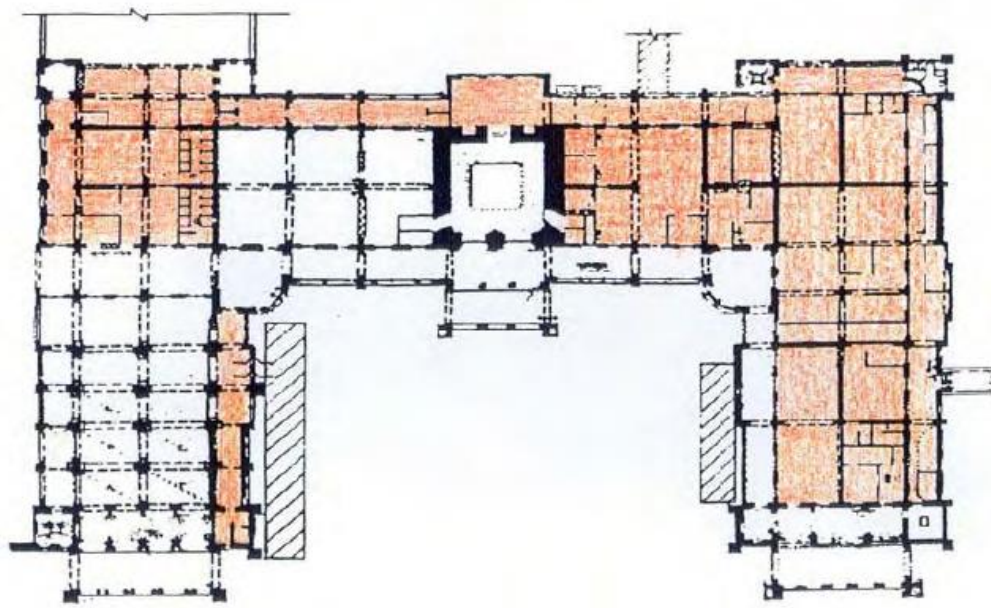
In Spain under the Spanish Empire, railway lines arrive in 1848, connecting Barcelona Station to Mataro Station. The presence of some mountainous terrain in Spain might be one of the difficulties for late railway constructions in Spain.

India, one of the British Colonies, opened its first railway line from Bombay to Thane in 16<sup>th</sup> April 1853 using a 14 carriage long train drawn by 3 locomotives named Sultan, Sindh and Sahib. The 21 miles journey took approximately 45 minutes. The railways were built to transport troops in war time and also to transport cotton to the factory mills in the United Kingdom. Bombay Station also known as Bori Bunder Station was rebuilt in 1878 and was completed in ten years, in 1888. The new station was named Victoria Terminus. In March 1996, they renamed it as Chhatrapati Shivaji Terminus (CST). Chhatrapati Shivaji Terminus was designated as one of the UNESCO World Heritage Sites in 2014, (Figure 2.16, Figure 2.17). In the late 19<sup>th</sup> Century, the railway lines of India were the fourth largest railways of the world.





Figure 2.16 Façade of Chhatrapati Shivaji Terminus [39]



Ground Floor Plan  
C S TERMINUS

GROUND FLOOR  
EXISTING POPULATION : 100 Nos.  
ALLOWED POPULATION : 240 Nos.



Figure 2.17 Plan of Chhatrapati Shivaji Terminus [40]

The Ottoman Empire was interested in building railways and began to build its first railway lines in the year 1833, but the first line could not be opened before 1854. This line took place between Alexandria and Kafr el-Zayyat on the Rosetta branch of the Nile on the Mediterranean coast, Egypt. The agreement between the General Governor of Egypt, Abbas Pasha, on behalf of the Ottoman Empire and the British engineer, George Stephenson on behalf of the British Government, was made in 12<sup>th</sup> July 1851. The Cairo Station, (Figure 2.18) served for about 36 years and it was rebuilt on 1892 with its current name, the Ramses Station is connected to Alexandria Station, (Figure 2.19) which are still in operation. On 23<sup>rd</sup> September 1856, they started an internal railway line from Izmir to Aydin, 81 miles (130 km) long.



Figure 2.18 Image of Cairo Railway Station on a postcard [41]

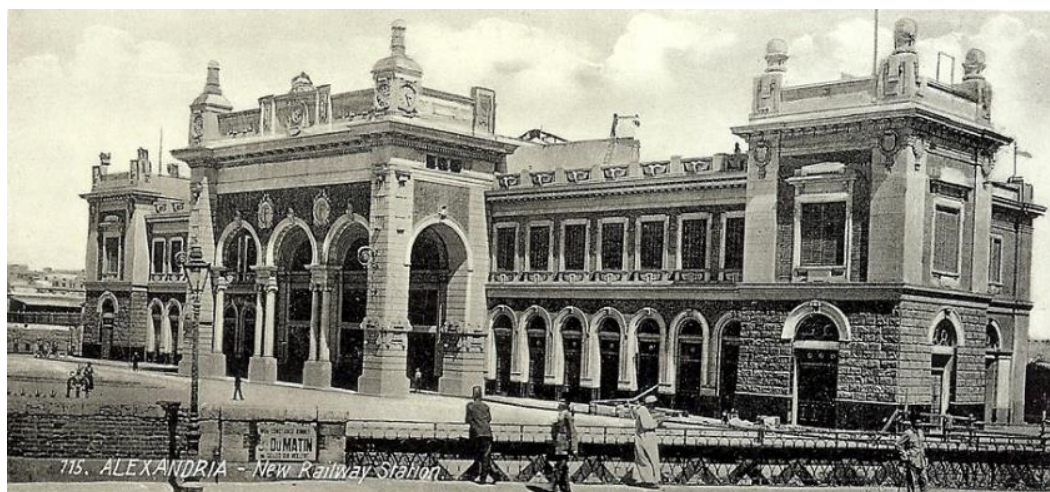


Figure 2.19 Image of Alexandria Railway Station on a postcard [41]



The same year, 1st September 1854 in Norway, the railway line between Oslo and Eidsvoll was opened for timber transportation. The passenger train services also operated on the same line. There are two stations in regards to the Oslo Station; one is Oslo West Station, the other is Oslo East Station.

The Oslo West Station was the second terminal station opened in 1872, normally serving the local people. However, it was very close to the Oslo West Station, not being connected to each other, the Oslo West Station ceased its operation in 1989, (Figure 2.20). Changing several functions, it now serves as the Nobel Peace Center. The Oslo East Station, (Figure 2.21) built in 1882 remained and new buildings were added in order to put up with increasing population and it was then named as Oslo Central Station. It includes new facilities and a shopping mall. While, the first Eidsvoll Station made in 1854 was torn down and in 1878-1880, it was rebuilt and closed in 1998. The Eidsvoll Station building became the Eidsivating Court in 2013, (Figure 2.22) since then it carries the same mission. Hence, the current Eidsvoll station (Figure 2.23) is located a few kilometers away from the old station building.



Figure 2.20 Image of Oslo West Railway Station [42]



Figure 2.21 Image of the Oslo East Station [42]



Figure 2.22 Façade of Old Eidsvoll Station, Norway [43]



Figure 2.23 Façade of New Eidsvoll Station, Norway [44]



The first steam railway in Australia started in 1854, whereas people travelled by horse-drawn carriages until the middle of the 1800's. The steam railway stretched from Melbourne (Figure 2.24), to Sandridge (now known as Port Melbourne). The current Melbourne station, known as Flinders Street Railway station was built between the years 1900-1907 (Figure 2.25).



Figure 2.24 Australia Flinders Street Station 1895, Melbourne station [45]



Figure 2.25 Current view of Flinders Street Railway built in 1900-1907 [45]

In 28 October 1856 the first railway line in Portugal between Lisbon and Carregado was opened. Only a temporary station building was built. The first station building in Portugal was the Santa Apolonia Station building (Figure 2.26), situated on the river bank of Tagus River was opened on 1<sup>st</sup> May 1865. Wrought irons, bricks, limestone and glass have been widely used in the construction of the building.



Figure 2.26 Lisbon Santa Apolonia Station opened on 1<sup>st</sup> May 1865 [46]

Argentina is one of the countries which have one of the largest railway lines, 36, 966 kilometers long. The Buenos Aires Western Railway was the company in charge of the first railway line, Buenos Aires–Floresta. The railway line in Argentina started in 1857, 29<sup>th</sup> August when the train travelled from Del Parque Station, Buenos Aires to Floresta Station for 10 kilometers. Del Parque Station (Figure 2.27, Figure 2.28), was the first main railway station building built together and ended at La Floresta Station (Figure 2.29). Del Parque Station was closed in 1883 due to the heavy traffic and was moved to the Once Station in 1882. Del Parque station then was demolished in 1889 to give way to the construction of the new theater, Teatro Colon.



Figure 2.27 Façade of Del Parque Station [47]



Figure 2.28 View of the train-shed from the west elevation of Del Parque Station [47]



Figure 2.29 La Floresta Station around 1869 [48]



Another British Colony, Pakistan in 13<sup>th</sup> May 1861, opened its first railway line between Karachi City and Kotri (Figure 2.30), 173 kilometers long after it took three years to construct it. The main reason to build the railway was to shorten cargo transportation time from Karachi to Delhi. The Karachi City Station, before known as the McLeod Station was the first station in Karachi before it moved to Karachi Cantonment Station, due to the uprising number of customers. The Karachi Cantonment Station (Figure 2.31, Figure 2.32) was built in 1898 to fulfill bigger space requirements; the Karachi City Station is continuing to be used as a passenger station building.



Figure 2.30 The facade view of Kotri Station [49]



Figure 2.31 Karachi Cantonment Station in early 1900 [50]



Figure 2.32 Façade view of Karachi Cantonment Station [51]

In June 14<sup>th</sup>, 1861, the construction of first railway lines by the British spread to South America whereby Paraguay opened its first journey from the port of Asuncion to Trinidad. The Asuncion Station (Figure 2.33) was restored by the help of Spanish Fund as it was badly damaged due to negligence and vandalism. According to the World Monuments Fund, the building has been put under their care in 2014. As for now, the Asuncion Station has been converted into a railway museum housing all the photos and artifacts as it was the first railway station in South America.



Figure 2.33 Paraguayan Central Railway Station, Asuncion in 1911 [52]

In Finland, the first railway line was opened between Helsinki and Hameenlinna on 31<sup>st</sup> January 1862. There were four intermediate stations; Pasila, Kerava, Hyvinkaa and Riihimaki before reaching Hameenlinna, the track was 96 kilometers long. The Helsinki Railway Station building was built in 1860 (Figure 2.34) but it was replaced with a new building, Helsinki Central Railway station (Figure 2.35) in 1919 to cater for a larger crowd. The Helsinki Railway station (Figure 2.36, Figure 2.37) was designed by Carl Albert Adelfelt with Neo-classical style. The train-shed can be seen in the 1907 photograph of the old Helsinki Railway station adjacent to station wall (Figure 2.38). The old Helsinki Railway Station was demolished in 1919.



Figure 2.34 The rear façade of the Helsinki Old Railway Station [53]

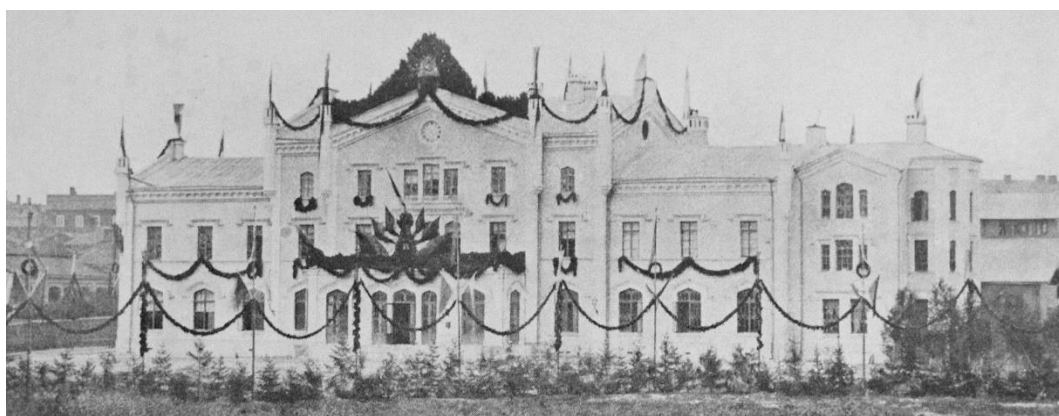


Figure 2.35 The façade of the Helsinki Old Railway Station in 1863 [53]

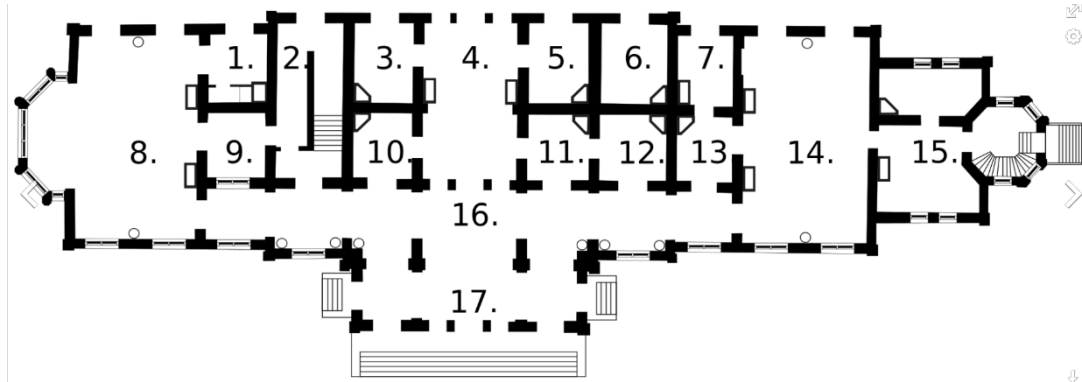


Figure 2.36 The ground floor plan of the Helsinki Old Railway Station [53]



Figure 2.37 The 1907 photographed shows the attached train-shed on Helsinki Old Railway Station [53]



Figure 2.38 Current Helsinki Central Railway Station [54]



While the Hameenlinna Station building (Figure 2.39) also opened in the same year, 1862 as the Helsinki Station building. The train-shed can be seen attached to the station walls which gable roof and decorative fascia board covering only the platform (Figure 2.40) It was destroyed during the Finnish Civil War in 1918. The original station building was replaced by a more recent building (Figure 2.41) which was completed in 1921.

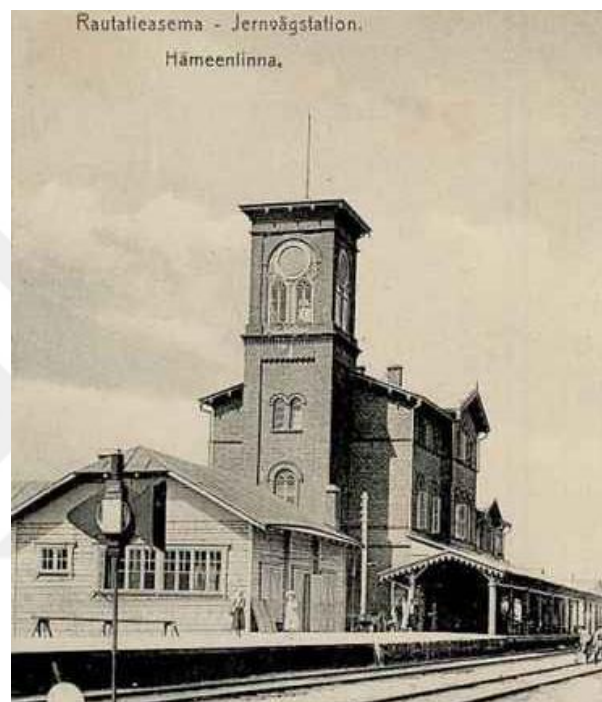


Figure 2.39 View of Hameenlinna Old Railway Station from the tracks [55]



Figure 2.40 View of the train-shed of Hameenlinna Old Railway Station attached to the building wall [56]





Figure 2.41 Current Hameenlinna Railway Station [57]

The railway construction in Bulgaria began when it was still within the territory of the Ottoman Empire, whereby the first railway line was opened between Ruse and Varna in 26<sup>th</sup> October 1866. It was a British venture and connected the busy ports of Ruse on the Danube River and Varna on the Black Sea, considerably shortening the old trade route through the Danube delta. While the present Varna Railway Station (Figure 2.42) building was built in between 1908 with some hiccups along the way and it was completed and opened on 25<sup>th</sup> May 1925. The station was the third station built for Varna and it was designed by Nikola Kostov and Kiro Marichkov. The application of butterfly concrete train-sheds can be seen in this station (Figure 2.43). In 1966, Ruse Station building was turned into Museum of Transportation.



Figure 2.42 The present Varna Railway Station, opened in 26 May 1925 [58]



Figure 2.43 The combinations of concrete and steel columns were used for butterfly train-shed [59]

Ceylon or now known as Sri Lanka was introduced with railways by the British in 1864. Initially, agriculture was the main reason for building a railway system in order to transport tea and coffee from plantations in the hill country district of Kandy to the port city of Colombo. The service connected Colombo Station and the Ambepussa Station (Figure 2.44, Figure 2.45).



Figure 2.44 Aerial view of Ambepussa Station [60]





Figure 2.45 View of Ambepussa Station [60]

As the growing goods and increasing passenger traffic, Colombo Station has been replaced in 1908 with the new Maradana Station (Figure 2.46) as the railway lines grew. Colombo Station was turned into a freight station.



Figure 2.46 New station called Maradana Station, 1908 [61]

Serbia has started its railways in the middle of 19<sup>th</sup> Century but the train was operated by horse drawn carriages. After the formation of the Serbian Railways, the first train departed from Belgrade to Niš in 23 August 1884.

As a conclusion, there were 26 countries from all over the world had established their railway lines as well as the station buildings from the year 1830 until 1885 for the main purpose which were to transport goods for mining industries, agricultures and also services in the fastest way possible. The Britain or English were the monopoly owners of the railways, the station buildings were the symbols of technology advancement whereby it was equipped with wide spans of shed and various architectural styles of the building frontage.

### CATALOGUE OF WEST COASTLINE STATION BUILDINGS

This chapter shows all the railway stations on the main West Coastline which in accordance to the rail map begins from the northern part of Peninsula Malaysia starting from Padang Besar Station, Perlis and ends with the station of Johor Bharu in the state of Johor at the southern end of the Peninsula and ends with Tanjong Pagar Station, Singapore. The West Coastline Railway Stations also include the stations of Singapore, now an independent country. The catalogues are divided into three phases of railway development according to the years built; Phase 1 begins in *1885 and ends in 1900*, Phase II continues from *1901 until 1948* and the last, Phase III starts in *1948 and ends in 1957*.

Station buildings were built as a necessity when the railway lines were constructed. In the catalogue takes place all of the station buildings built but only the ones built during the British era will be discussed and evaluated at the end. It only concerned on the first railway station buildings. Photographs are captured for the analysis of the main building façades (entrance), their styles, and detail plans.

The catalogue was created by the help of the existing railway maps gained from the archives (August 1898, 1918, 1919, 1927) and the statement showing the opening dates of the railway

lines from the annual report of Federated Malay States Railways (1905–1939) and Malayan Railway Administration (1949 – 1958).

Figure 3.1 shows map of the railway line with station buildings built in accordance to the development phases from the beginning of 1885 until the end, 1957.





Figure 3.1 Map of the main railway line shows the station buildings whereby the red dotted shows the first phase developments and the blue dotted shows the second phase developments of the West Coastline, benefited from Museum Keretapi Tanah Melayu Berhad

### **3.1 DEVELOPMENT PHASE 1 (1885 – 1901)**

The first development stage of the railway line in Malaya started in 1885 when the Perak State built its railway line for transporting tin ores from the mining area to Port Weld for exportation. Railway constructions started to bloom after the Perak State's success and it influenced other states to build their own railways. At this first phase, most of the states were financed by their own government and companies, which includes the Perak State Railway (1885-1901), the Selangor State Railway (1886-1901), Sungei Ujong Railway Company (1891-1908), and also the Straits Settlements, (Melaka, Dinding Perak, Penang, Singapore).

#### **Phase 1:**

#### **The Perak State Railway Station Buildings (1885 – 1901)**

It can be said that, the history of Perak transportation system is determined by the physical geographical layout of the land. Before the introduction of the railway line, the Perak River was very important for transporting goods from one place to another, during the high water tides by using small boats known as 'sampan'. The rapid growth of tin mining during the 1860s' led to a proposal to build a railway to connect the mines in Larut area to the coast.

Beginning with the Perak State Railway, the first railway line which crossed the mining area in Larut to the nearby, Port Weld which was built in 1885 of 8 miles long. The cost of building the railway line was \$345, 000.00 which included the railway lines, stations, steam engines and other related equipments. The Perak Government commissioned the Ceylon Government to carry out the work as there were no engineers in Malaya who experienced in building a railway. The lack of trained workers and the unstable and swampy earth ground were some of the difficulties which they faced, but it was worthwhile when the railway line turned out to be a success. This line was important since the linkage of the mining center, Larut to the Port Weld contributed also to the establishment of communication throughout the area. Port Weld



becomes a port for coastal steamers, and was a center for supplying mangrove tree used for maintaining energy in mining industry, installations and railways (Malayan Railway Administration Souvenir, 1956).

List of the Perak State Railway Station Buildings;

- |  |                    |
|--|--------------------|
| 1. Taiping                                     | 27. Bukit Mertajam |
| 2. Simpang                                     | 28. Alma           |
| 3. Matang                                      | 29. Simpang Ampat  |
| 4. Port Weld                                   | 30. Sungei Bakap   |
| 5. Kamunting                                   | 31. Nibong Tebal   |
| 6. Krian Road                                  | 32. Kuala Kangsar  |
| 7. Ulu Sepetang                                | 33. Tanjong Malim  |
| 8. Teluk Anson                                 | 34. Alor Pongsu    |
| 9. 16 <sup>th</sup> Mile                       | 35. Padang Rengas  |
| 10. Tapah Road                                 |                    |
| 11. Batu Gajah                                 |                    |
| 12. Lahat                                      |                    |
| 13. Ipoh                                       |                    |
| 14. Kota Bahru                                 |                    |
| 15. Talam                                      |                    |
| 16. Kampar                                     |                    |
| 17. Tanjong Rambutan                           |                    |
| 18. Chemor                                     |                    |
| 19. Sungei Siput                               |                    |
| 20. Salak North                                |                    |
| 21. Enggor                                     |                    |
| 22. Pondok Tanjong                             |                    |
| 23. Krian River/Perak Boundary/Parit<br>Buntar |                    |
| 24. Simpang Lima                               |                    |
| 25. Sungai Bogak                               |                    |
| 26. Bagan Serai                                |                    |

## **Phase 1:**

### **The Selangor State Railway Station Buildings (1886 – 1902)**

In September 1886, the Selangor Government Railway opened the line from Kuala Lumpur to Klang (Bukit Kuda). The construction started in 1884 which was funded by the state with the assistance of a loan from the Strait Settlements. However, the inability of the Straits officer to get the agreed loan resulted in getting a loan from the state of Perak and the Chinese mine owner which was the principal miner in Perak (Smith, 2006; p.8). According to the Straits Times Weekly Issue of 6<sup>th</sup> October 1886, it is stated that the extent of the lines from Kwala Lumpur to Bukit Kudah is nineteen and a half miles, having two intermediate stations, one at Pataling about five miles, and another at Batu Tiga, thirteen miles from Kuala Lumpur.

List of the Selangor State Railway Station Buildings:

- |                      |                     |
|----------------------|---------------------|
| 1. Kuala Lumpur      | 12. Ulu Yam         |
| 2. Pataling          | 13. Rasa            |
| 3. Batu Tiga         | 14. Kuala Kubu      |
| 4. Bukit Kuda, Klang | 15. Salak           |
| 5. Batu Junction     | 16. Sungei Besi     |
| 6. Kepong            | 17. Kajang          |
| 7. Kuang             | 18. Port Swettenham |
| 8. Rawang            | 19. Kerling         |
| 9. Pudoh (Pudu)      | 20. Kalumpang       |
| 10. Serendah         | 21. Bangi           |
| 11. Sungei Tampeian  |                     |

## Phase 1;

### Sungei Ujong Railway Company Railway Station Buildings (1891 – 1908)

On July 1891, the privately owned railway company launched its line with the length of 24½ miles long between Seremban, the capital of the state to Port Dickson, in the state of Negeri Sembilan with the cost of £192, 500. It runs two or three times daily for the passenger trains whilst the goods trains run as many times as often it can be dispatched. The map dated August 1898 below (Figure 3.2) shows the railway construction progress including the Sungei Ujong Railway Company stations. The line in Sungei Ujong shows the connection between the Seremban and Port Dickson Stations. Meanwhile, the 1919 map (Figure 3.3) shows the Seremban – Port Dickson lines with intermediate stations in between which includes the Mambau, K. Sawah, Siliau, Bagan Pinang and Sirusa Stations.

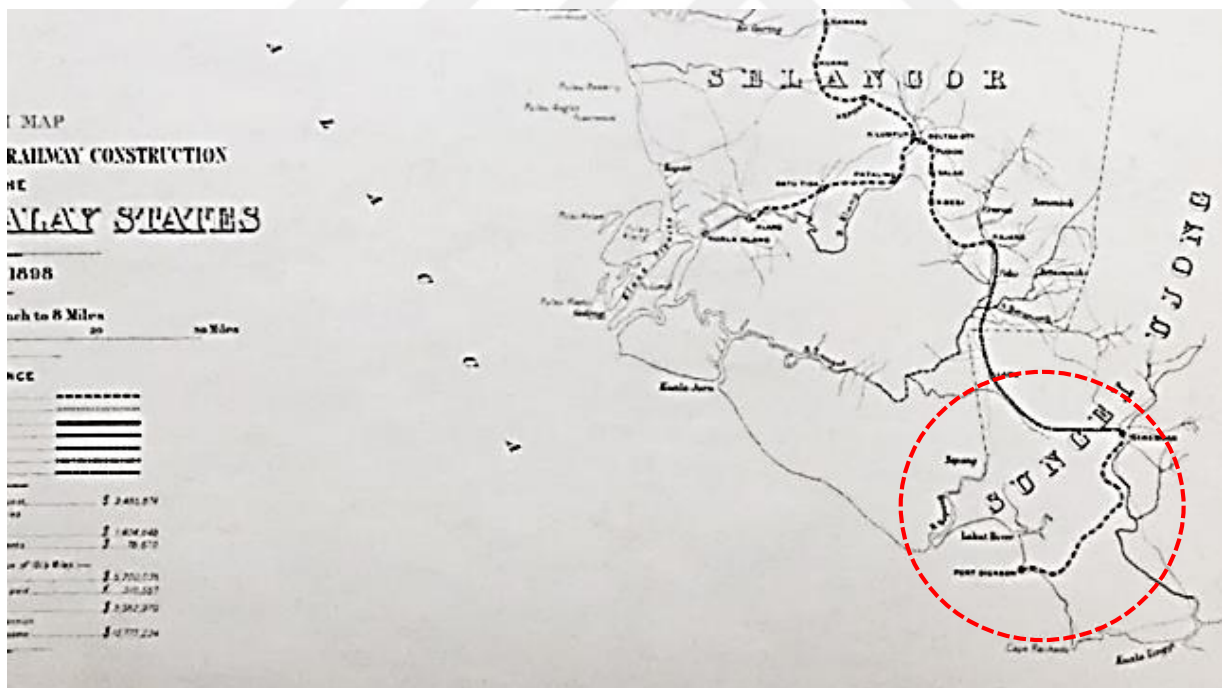


Figure 3.2 Map of August 1898 of Railway Construction shown in the red circle; the Sungei Ujong Railway Company stations from Seremban to Port Dickson [63]



Figure 3.3 Sketch Map of Federated Malay States Railways 1919 and their connections, showing the intermediate stations between Seremban – Port Dickson Station [64]

### Phase 1:

#### Muar State Railway Stations (1889 – 1918)

Muar is a district in Johor, Malaya which was known as Bandar Maharani. The district of Muar was important because of the agricultural industry such as gambiers, coconuts and pinangs. It began its operation in 1890, known as Muar State Railway (MSR) and ceased to operate at the year of 1918.

Parit Jawa was not accessible from the land as it was exposed to pirate attacks, and the river and the sea were used as the main sea route transportation. As a result, more convenient and safely accessible routes were required for the villagers as well as the agricultural goods. By 1888, work was begun to link Bandar Maharani, the administrative capital to Parit Jawa, an important agricultural district. The railroad construction was finished in the year 1890,

beginning from Bandar Maharani and ending in Parit Jawa (Figure 3.4). All the construction and railway materials were brought from England, even the locomotives.

In 1914, the line was extended another 3 miles (4.8 km) to Sungai Pulai. During the year 1916, there were 5 stations along the 14 miles route long, and 8 temporary stations shown below in the list. There was no further information on the railway station buildings location, which is why it could not be detected.

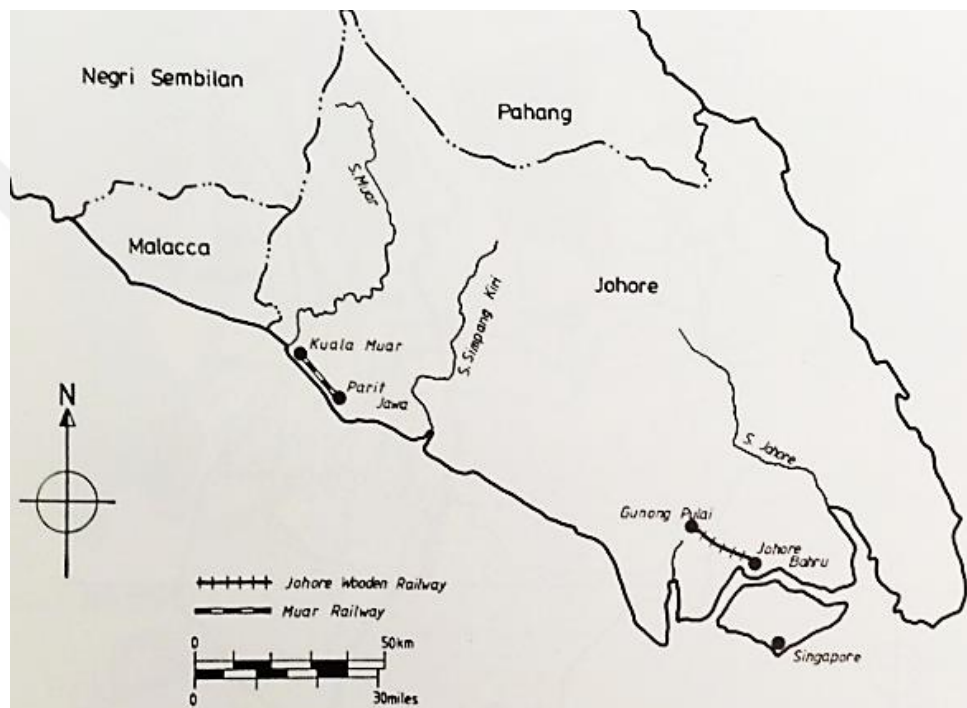


Figure 3.4 Map of the early railways of Johore [1]

List of Muar Railway Station Buildings:

1. Bandar Maharani
2. Parit Bakar
3. Parit Jawa
4. Parit Pecah
5. Sungai Pulai


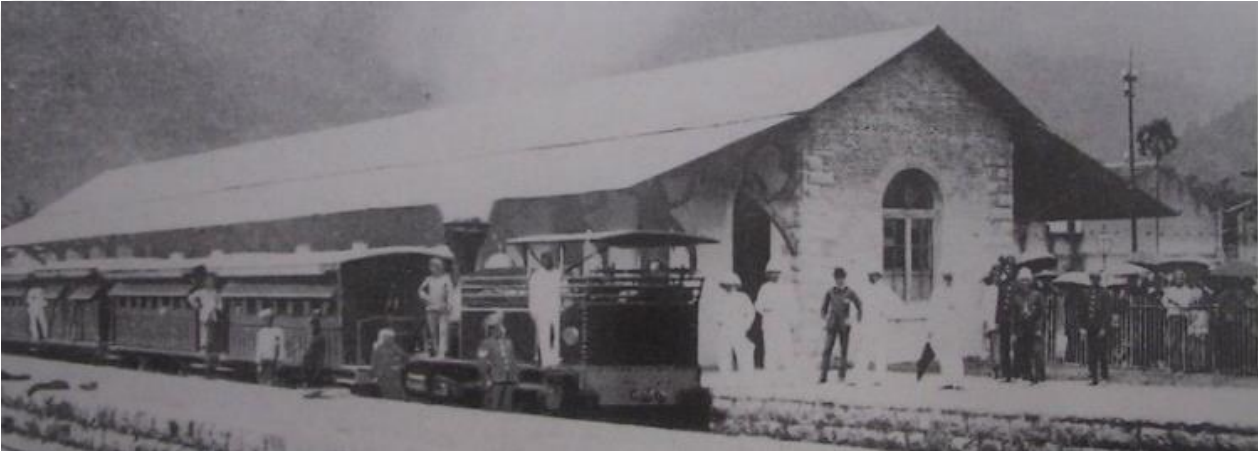
List of Temporary Station Buildings:

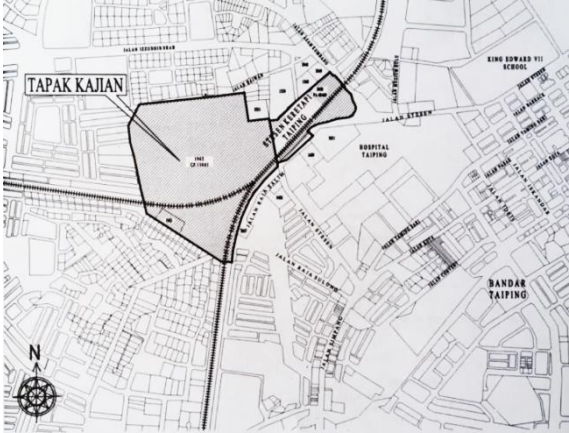



- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. Parit Perepok</li> <li>2. Parit Keroma</li> <li>3. Parit Raja</li> <li>4. Parit Unas</li> </ol> | <ol style="list-style-type: none"> <li>5. Parit Samsu</li> <li>6. Parit Jamil</li> <li>7. Parit Bulat</li> <li>8. Parit Seri Menanti</li> </ol> |
|---|---|

List of all the First Phase Railway Station Buildings on the West Coastline:

1. Taiping
2. Simpang
3. Matang
4. Port Weld
5. Kuala Lumpur
6. Pataling
7. Batu Tiga
8. Bukit Kuda, Klang
9. Kamunting
10. Seremban
11. Port Dickson
12. Krian Road
13. Ulu Sepetang
14. Resident
15. Batu Junction
16. Kepong
17. Kuang
18. Rawang
19. Sultan Street
20. Pudoh/ Pudu
21. Serendah
22. Tapah Road
23. Batu Gajah
24. Lahat
25. Ipoh
26. Kota Bahru
27. Talam
28. Sungei Tampeian
29. Ulu Yam
30. Rasa
31. Kuala Kubu
32. Salak
33. Sungei Besi
34. Kampar
35. Tanjung Rambutan
36. Chemor
37. Sungei Siput
38. Kajang
39. Salak North
40. Enggor
41. Port Swettenham
42. Pondok Tanjung
43. Krian River/Perak Boundary/Parit  
Buntar
44. Simpang Lima
45. Sungai Bogak
46. Bagan Serai
47. Kerling
48. Kalumpang
49. Bukit Mertajam
50. Alma
51. Simpang Ampat
52. Sungei Bakap
53. Nibong Tebal
54. Kuala Kangsar
55. Tanjong Malim
56. Alor Pongsu
57. Padang Rengas
58. Bangi

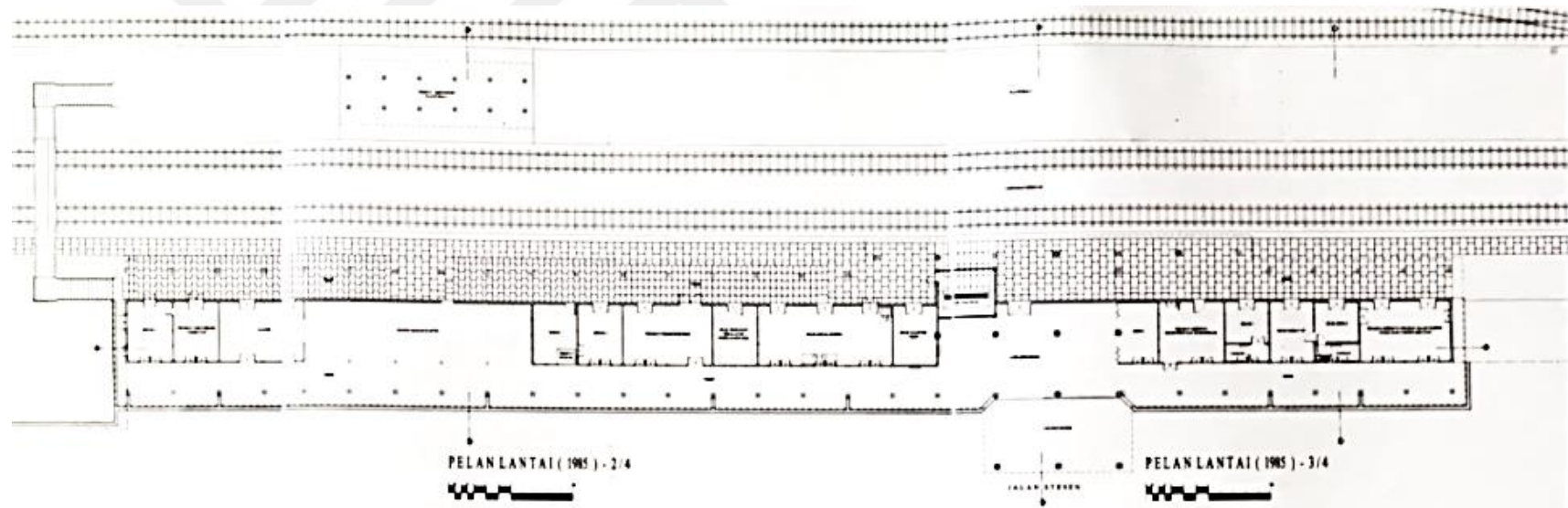


<b>NAME:</b> Taiping	<b>YEAR OPEN:</b> 1.6.1885 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> King Edward VII Primary School, Jalan Muzium Hulu, 34000 Taiping, Perak	<b>CAT. NO:</b> 1.1
 <p>Map 1.1 The map shows three different locations of the station buildings, A shows the original station building site (demolished), B the second station building (closed and preserved), and C the new station building (in-operation), [65]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 1 Taiping Station, 1885 on the site of the present King Edward VII school field [66]</p>		
<p><b>BUILDING HISTORY:</b> Taiping is the first railway station building in Malaya opened in 1885. The station was named after the town, Taiping. The first station building was situated where the King Edward VII Primary school now stands (refers to ‘A’ in Google Map). In 1980s, the tracks no longer existed and the building was dismantled. The building was officiated by the first British administrator, Sir Hugh Low.</p> <p><b>CURRENT SITUATION:</b> Demolished.</p>		<p><b>PLAN:</b> According to the 1885 photo above can be seen that the probability of station building has a rectangular plan.</p>	<p><b>MAIN FAÇADE:</b>  No pictures found.</p>	
		<p><b>BUILDING DESCRIPTION:</b> According to the 1885 photo above can be seen a gable roof known as ‘bambung panjang’ with overhanging roof eaves which were supported by knee braces and circular spandrels. Clean cut stones or quoins were put at the corners of the masonry building and quoins also probably placed on the other corner. Circular shaped of two panels window seen placed on side elevation.</p>		

<b>NAME:</b> Taiping	<b>YEAR OPEN:</b> - <b>YEAR BUILT:</b> 190?	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Stesen Keretapi Taiping, Jalan Stesen, 34000, Taiping, Perak.	<b>CAT. NO:</b> 1.2
 <p>Map 1.2 The map shows the location plan of the station building [67]</p>		<p><b>PHOTOGRAPHS:</b></p> <div style="display: flex; justify-content: space-around;"> <div>  <p>Image 2 Taiping Station circa 1900 [68]</p> </div> <div>  <p>Image 3 The tracks and train-sheds circa 1900 [68]</p> </div> </div> <div>  <p>Image 4 2015 picture of the main façade station building.</p> </div>		
<p><b>BUILDING HISTORY:</b></p> <p>The second wooden station built in early 1900s. Relocated to the Jalan Stesen site few kilometres away from the original site, King Edward VII school.</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>According to the 1900 photo shown above can be seen that the station building has a rectangular building plan and covered with a combination using hipped gable roof for the main building intersecting with three gable roofs overlooking the tracks. There is one gable roof as projecting porticoes on façade. At the of the roof edges, rod type finial were put while in the latest photo above, the finial was no longer existed.</p>		
<p><b>CURRENT SITUATION:</b> Closed and preserved. It is empty and not used.</p>				

<b>NAME:</b> Taiping	<b>YEAR OPEN:</b> - <b>YEAR BUILT:</b> 190?	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Stesen Keretapi Taiping, Jalan Stesen, 34000, Taiping, Perak.	<b>CAT. NO:</b> 1.2.1
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**PLAN AND ELEVATION:**



1. Station Plan shows rectangular plan shaped with an entrance porch. It has three tracks with two platforms connecting with a pedestrian bridge at the left hand side [67]



2. Front Elevation shows hipped roof intersecting with gable roof as a front porch or projecting portico as a main entrance [67]

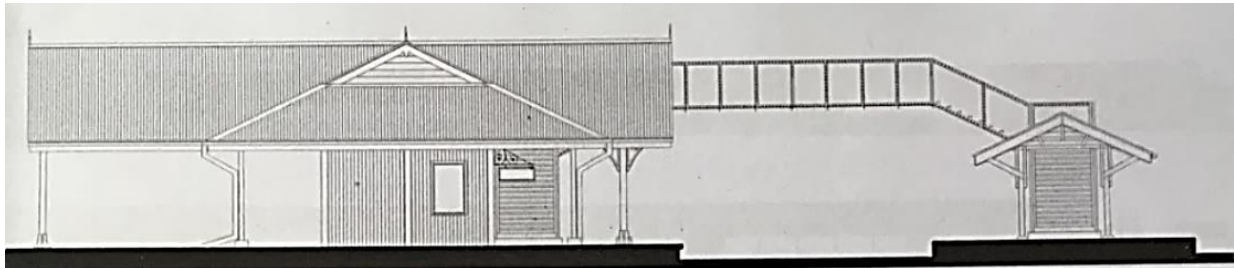


<b>NAME:</b> Taiping	<b>YEAR OPEN:</b> - <b>YEAR BUILT:</b> 190?	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Stesen Keretapi Taiping, Jalan Stesen, 34000, Taiping, Perak.	<b>CAT. NO:</b> 1.2.2
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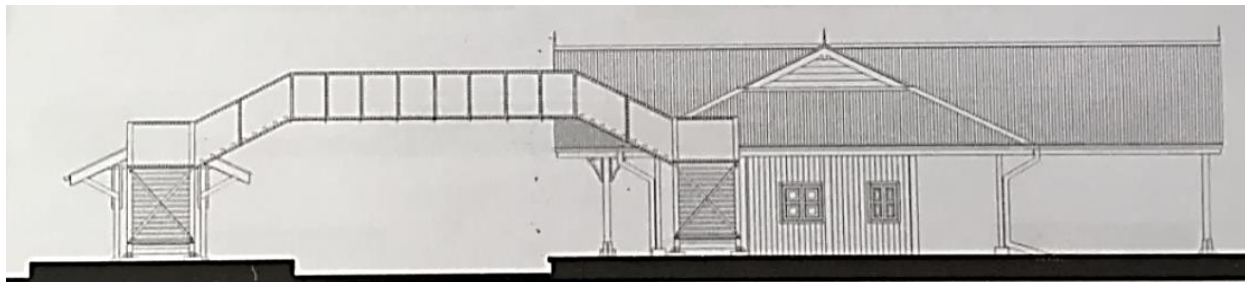
**ELEVATIONS:**



1. Rear Elevation shows the façade from the tracks with three gable roof intersecting with main hip gable roof [67]



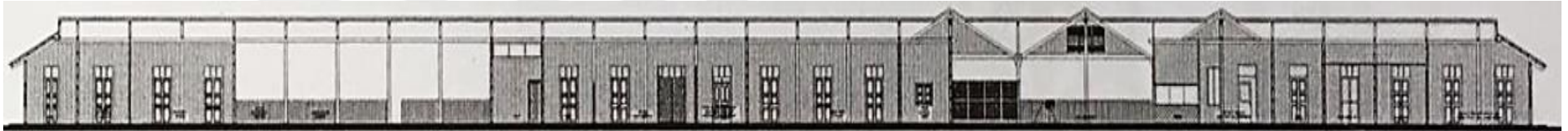
2. West Elevation shows the main entrance, main station building and its platform, with overhead bridge connected to an island platform [67]



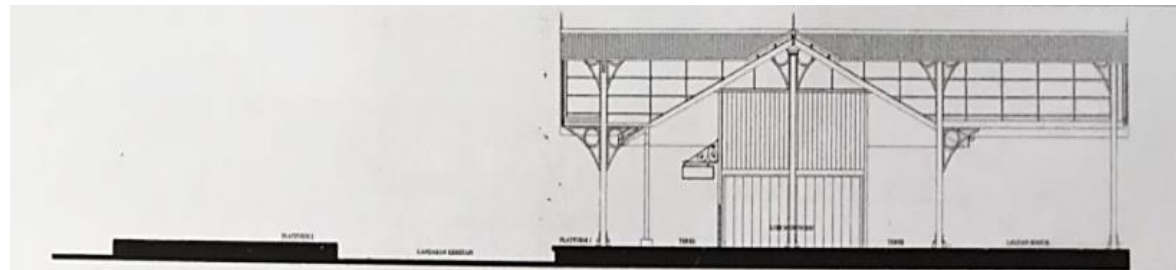
3. East Elevation shows the overhead bridge located at the end of the station building [67]

<b>NAME:</b> Taiping	<b>YEAR OPEN:</b> - <b>YEAR BUILT:</b> 190?	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Stesen Keretapi Taiping, Jalan Stesen, 34000, Taiping, Perak.	<b>CAT. NO:</b> 1.2.3
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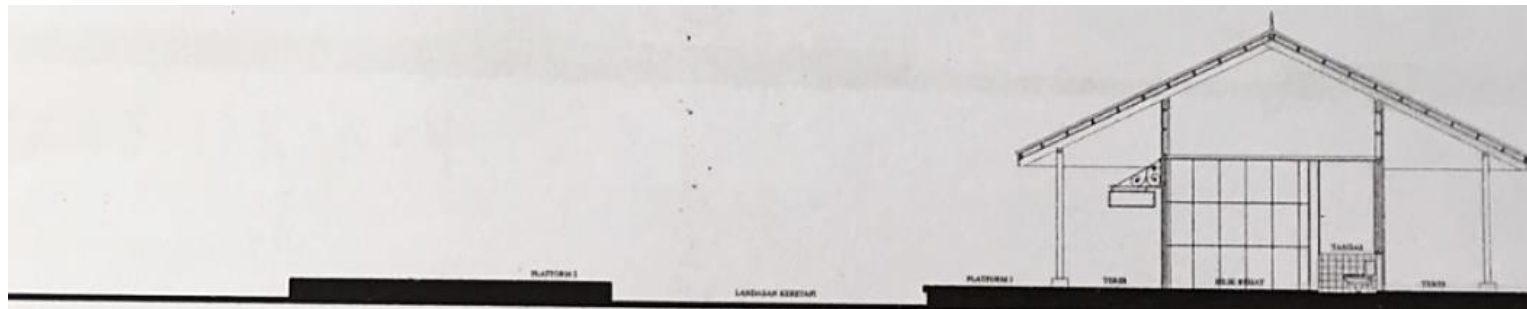
**SECTIONS:**



1. Longitudinal Section of the interior showing doors with upper louvered windows for ventilation [67]



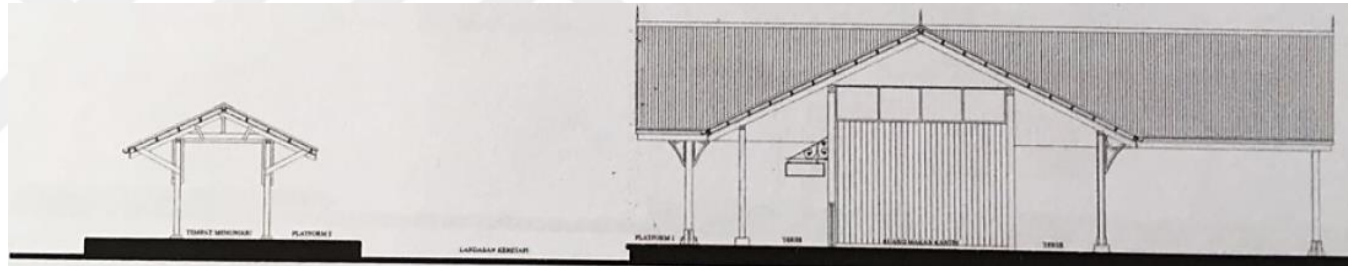
2. Section B-B shows the timber roof structures and columns completed with spandrels [67]



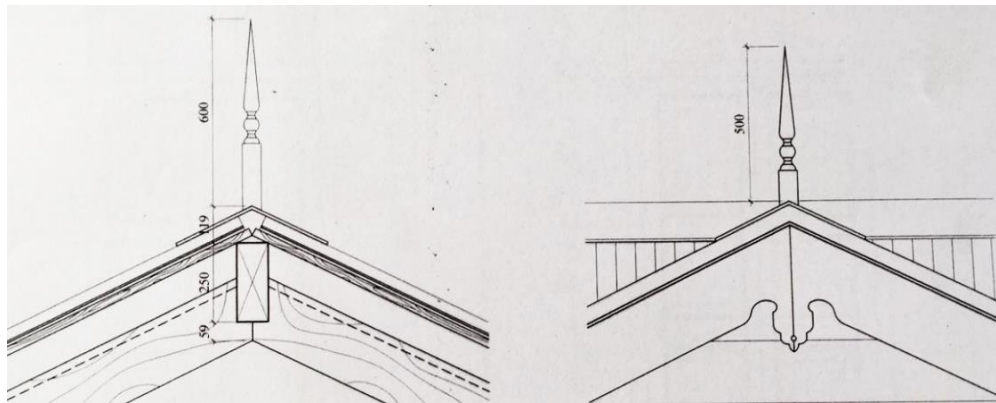
3. Section C-C shows the interior space of toilet area [67]

<b>NAME:</b> Taiping	<b>YEAR OPEN:</b> - <b>YEAR BUILT:</b> 190?	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Stesen Keretapi Taiping, Jalan Stesen, 34000, Taiping, Perak.	<b>CAT. NO:</b> 1.2.4
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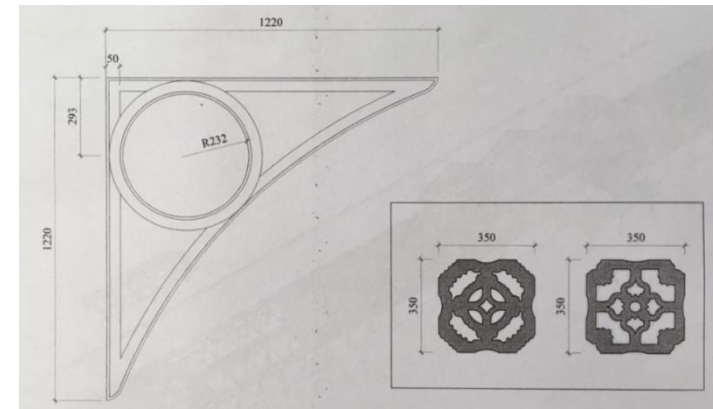
**SECTION AND DETAILS:**



1. Section D-D shows the structure of the train shed [67]



2. Roof detail shows the wooden finial that normally used in vernacular architecture, [67]



3. The circular spandrel used at the wooden column and two types of ventilation used at the station building, [67]



<b>NAME:</b> Taiping	<b>YEAR OPEN:</b> - <b>YEAR BUILT:</b> 190?	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Stesen Keretapi Taiping, Jalan Stesen, 34000, Taiping, Perak.	<b>CAT. NO:</b> 1.2.5
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**ELEVATIONS:**



1. The circular spandrel used at the wooden column in 2015 [69]






2. Ticketing counter in 2015 [69]





1. The casement window panels [69]



<b>NAME:</b> Taiping	<b>YEAR OPEN:</b> 27.2.2014 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Stesen Keretapi Taiping, Jalan Stesen, 34000, Taiping, Perak.	<b>CAT. NO:</b> 1.3
 <p>Map 1.3 The map shows three location of the station buildings, A show the original station building site (demolished), B the second station building (closed and preserved), and C the new station building (in-operation), [65]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p style="text-align: center;">Image 5 Taiping New Station</p>		
<p><b>BUILDING INFORMATION;</b> Completed new station and opened on 27 February 2014. It was raised about 1-2 metres higher because of the new double tracking project.</p> <p><b>CURRENT SITUATION:</b> In Operation.</p>				

NAME: Simpan	YEAR OPEN: 1.6.1885 YEAR BUILT: -	ARCHITECT: Unknown	ADDRESS: Simpan Station, 34700, Perak.	CAT. NO: 2
 <p>Map 2 The red dot on FMSR Construction Map dated August 1898 show Simpan Station [63]</p>		<p>PHOTOGRAPHS:</p>  <p>Image 6 Simpan Station circa 1886 [70]</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Simpan station was built together with Taiping – Port Weld Railway Line, 1885 (yellow dots on the map). There were two intermediate stations before reaching the Port Weld Station, (1) Simpan Station (red dot in map) and (2) Matang Station.</p>		<p><b>PLAN:</b></p> <p>According to the 1885 photo above can be seen that the probability of station building has a rectangular plan.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Derailed during the World War II by the Japanese then it was demolished. The line and the station do not exist today.</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>According to the 1886 photo shown above can be seen that the station building has a ‘bumbung panjang’ or gable roof. The gable roof with overhanging roof eaves has circular knee braces to support the roof.</p>		

<b>NAME:</b> Matang	<b>YEAR OPEN:</b> 1.6.1885 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Matang Station, 34700, Perak.	<b>CAT. NO:</b> 3
 <p>Map 3 The red dot on FMSR Construction Map dated August 1898 show Matang Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Matang station was built together with Taiping – Port Weld Railway Line, 1885 (yellow dots on the map). There were two intermediate stations before reaching the Port Weld Station, (1) Simpan Station (red dot in map) and (2) Matang Station.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Derailed during the World War II by the Japanese then it was demolished. The line and the station do not exist today.</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		



<b>NAME:</b> Port Weld	<b>YEAR OPEN:</b> 1.6.1885 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Port Weld Station, Port Weld, 34650, Perak.	<b>CAT. NO:</b> 4
 <p>Map 4 The red dot on FMSR Construction Map dated August 1898 show Port Weld Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 7 Port Weld station circa 1886 [70]</p>		
<p><b>BUILDING HISTORY;</b> Port Weld station was built together with the Taiping – Port Weld Railway Line, 1885 (yellow dots on the map). The line was closed and the railway never been reinstalled after the Japanese intervention.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Derailed during the World War II by the Japanese then it was demolished. The line and the station do not exist today.</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>According to the 1886 photo above, it can be seen that the station building applied gable roof.</p>		

<b>NAME: Kuala Lumpur</b>	<b>YEAR OPEN: 15.9.1886</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Kuala Lumpur Station, Kuala Lumpur.</b>	<b>CAT. NO: 5.1</b>
 <p>Map 5.1 The red dot on FMSR Construction Map dated August 1898 show Kuala Lumpur Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 8 Kuala Lumpur station on 18th September 1886, the opening platform between K. L. - Bukit Kuda by Sir Frederick Weld, G. C. M. G. [71]</p>		
<p><b>BUILDING HISTORY;</b> Kuala Lumpur Station was opened on 15<sup>th</sup> September 1886. It was believed that the Kuala Lumpur Station was a temporary station before they built the new station. The red dot on map shows this station. According to the Straits Times Weekly Issue, on 15<sup>th</sup> September 1886, the contractors employed to carry out all the works, Messrs. Gordon &amp; Co., of whom two of the partners, Mr. Gordon and Mr. Bailey.</p> <p><b>CURRENT SITUATION:</b> Demolished</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		



<b>NAME:</b> Kuala Lumpur	<b>YEAR OPEN:</b> 7.11.1892 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Kuala Lumpur Station, Foch Avenue, Kuala Lumpur	<b>CAT. NO:</b> 5.2
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**PHOTOGRAPHS:**



Map 5.2 The red dot on FMSR Construction Map dated August 1898 show Kuala Lumpur Station [63]

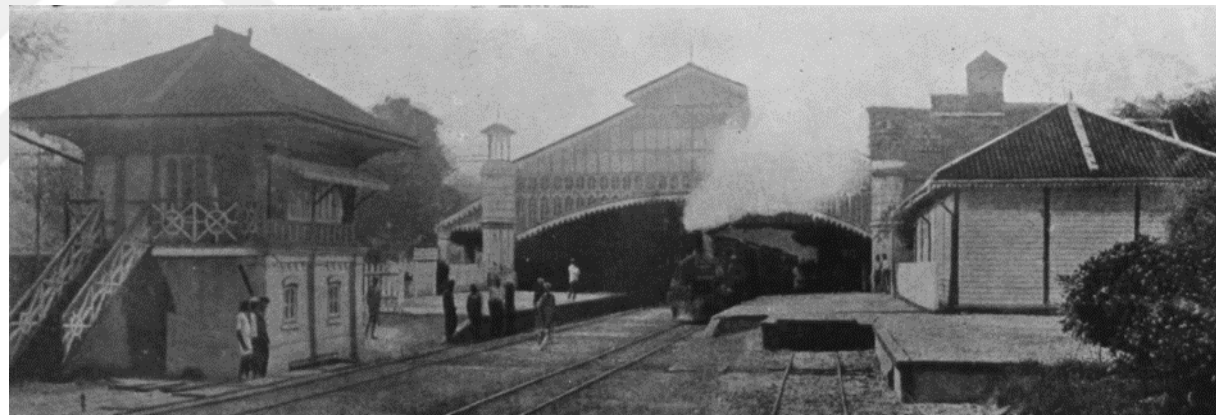


Image 9 View of the station building with tracks [71]

**BUILDING HISTORY;**

Kuala Lumpur station was opened on 7<sup>th</sup> November 1892. It was then left abandoned when the new Kuala Lumpur Station was built and become the main station in Kuala Lumpur. No old plans and drawings were found.

**CURRENT SITUATION:** Demolished.



Image 10 View of the station building main façade [71]

<b>NAME:</b> Kuala Lumpur	<b>YEAR OPEN:</b> 7.11.1892 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Kuala Lumpur Station, Foch Avenue, Kuala Lumpur	<b>CAT. NO:</b> 5.2.1
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**PHOTOGRAPHS:**



Image 11 View of the station building towards the loggia [71]

**BUILDING DESCRIPTION:**

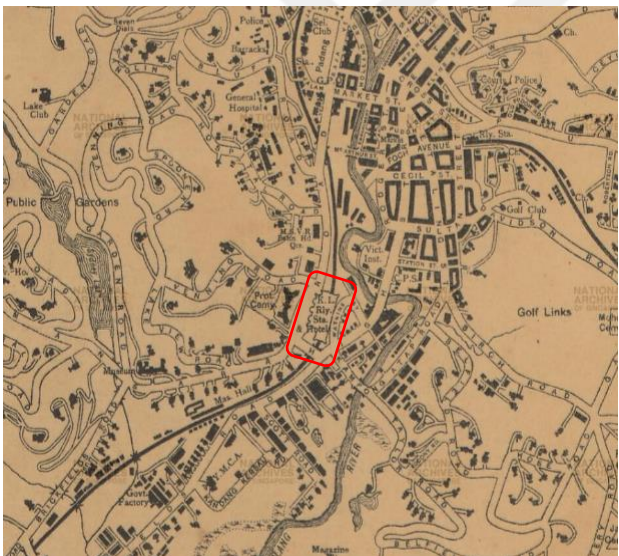
According to Image 9, it can be seen a large steel and glass train-sheds covering its two tracks. The small square building or might be signal cabin on the left covered with 'bumbung limas perabung lima' or hipped roof. The roof ends were covered with 'papan cantik' or decorative fascia boards.

According to Image 10, it can be seen that there are two parts of station building. The main building with a loggia at the centre and a clock tower with finial on top of its roof. The combination of gabled roof interlocking each other from both sides can be seen on the building. At the corner of the wall were finished with quoins. It has a triplet of long window panels on the façade and a circular arch window on its side. Small windows can be seen down the roof eaves in both buildings.

Image 11 shows the portico with segmental arch supporting by four columns and balustrades acting as parapets covering the horizontal rooflines above the portico. The overhanging roof eaves also can be seen and used to cover the walkways.

<b>NAME: Kuala Lumpur</b>	<b>YEAR OPEN: 6.5.1911</b> <b>YEAR BUILT: 1910</b>	<b>ARCHITECT: Arthur Benison Hubback</b>	<b>ADDRESS: Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.</b>	<b>CAT. NO: 5.3</b>
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**PHOTOGRAPHS:**



Map 5.3 The red indicates the Kuala Lumpur Station on Kuala Lumpur Map dated 1920 [72]



Image 12 Kuala Lumpur Station circa 1910 [71]

**BUILDING HISTORY;**

Built in 1910 and was relocated to a new site. The station was opened on 6<sup>th</sup> May 1911. The architect was Arthur Benison Hubback and the contractors, Messrs. J.A and P.C. Russel. It became the main station in Kuala Lumpur. This station also includes hotel services and known as Station Hotel.

**CURRENT SITUATION:** Still in Operation



Image 13 Kuala Lumpur Station circa 1960 [73]



<b>NAME: Kuala Lumpur</b>	<b>YEAR OPEN: 6.5.1911</b> <b>YEAR BUILT: 1910</b>	<b>ARCHITECT: Arthur Benison Hubback</b>	<b>ADDRESS: Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.</b>	<b>CAT. NO: 5.3.1</b>
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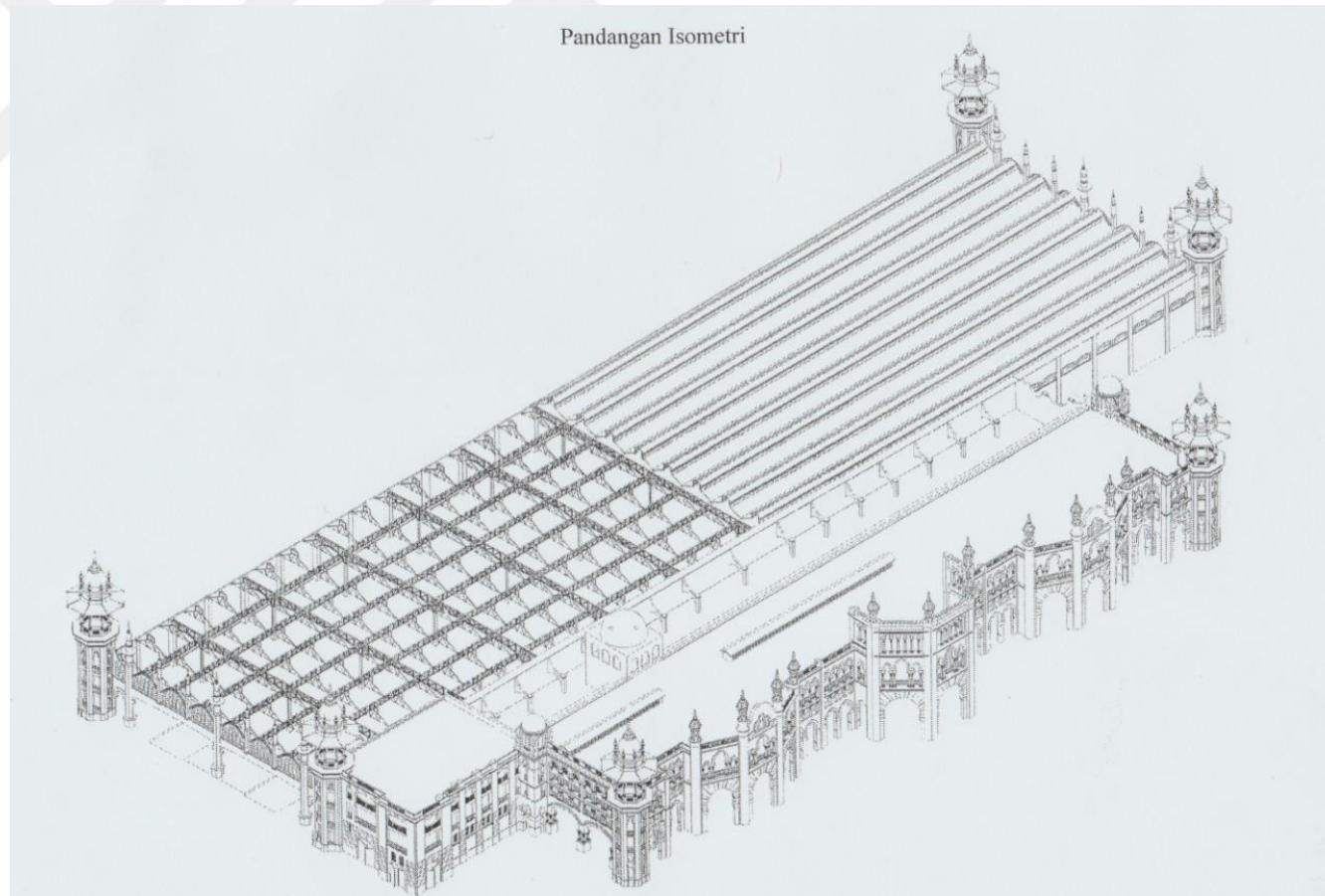
Image 14 Side view of the Kuala Lumpur Station circa 2016

**BUILDING DESCRIPTION:**

It is a two-storeys building with gable and flat roof. The overall picture of the station building; it has symmetrical façade with three protruding pseudo porticoes. The façade ends with circulation towers at both corners.

On the ground floor takes place an open gallery, adorned with horseshoe arches, twin pointed horseshoe arches and ogee arches. Meanwhile on the first floor takes place tripartite pointed horseshoe arches with double muqarnas columns capital seen on the protruding porticoes, and quadruplet pointed horseshoe arches were used on its verandah or walkways. Balustrades were used as parapets along the rooflines. At both corners of the building, chatris are seen. Chatris is octagonal in shaped supported with 8 columns, multifoil arches and surmounted with onion dome. Ornamental pinnacles are placed surrounding it. Meanwhile on the central protruding portico, colonnades were formed with muqarnas columns and horseshoe arches and it was ended up with battlements. The pinnacles are seen as intervals at every corner of the protruding portico. In the second protruding portico, pinnacles also seen as intervals at every corner and in the middle of it, placed a semicircular parapet with three horseshoe arches.

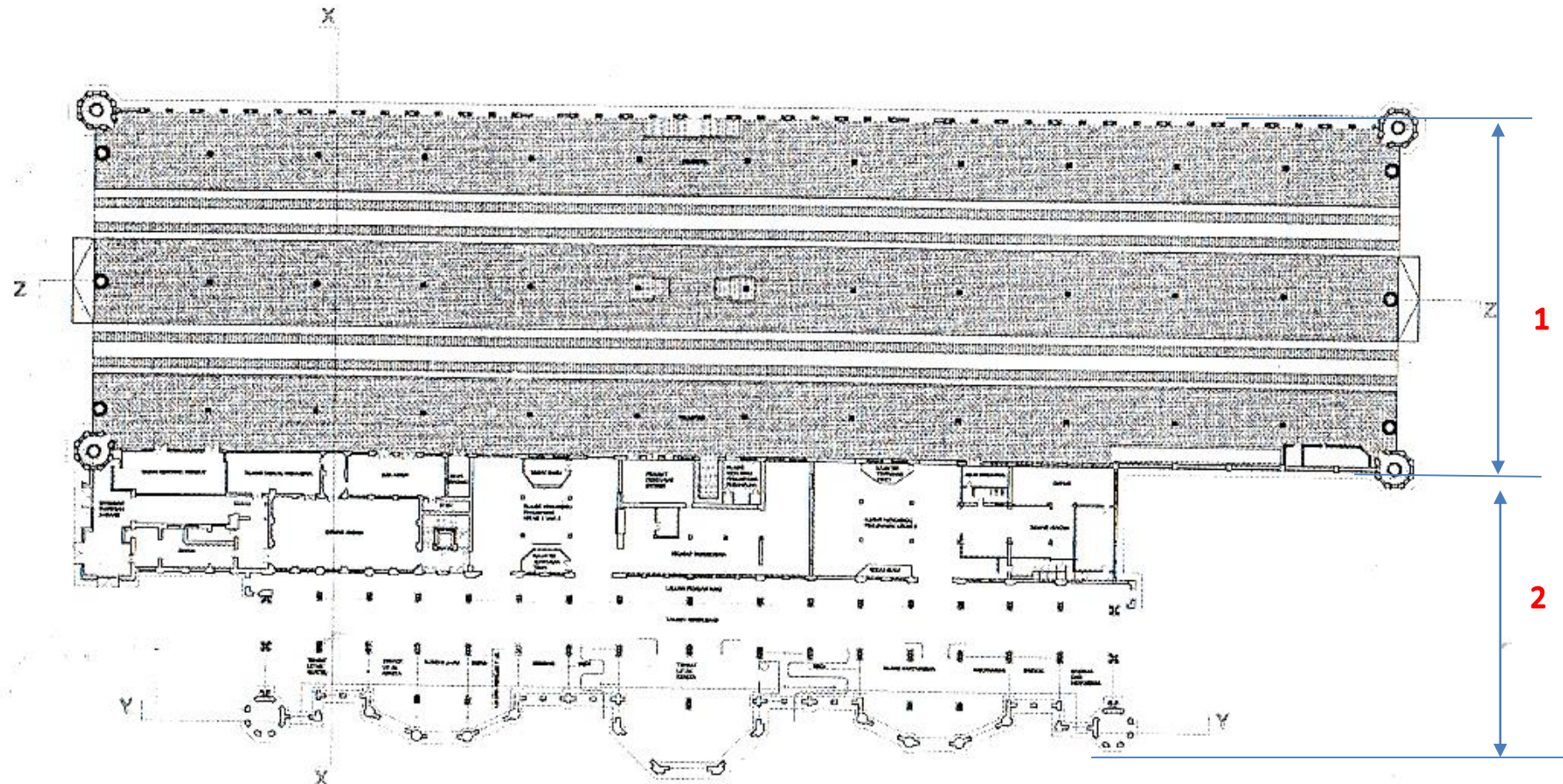
<b>NAME: Kuala Lumpur</b>	<b>YEAR OPEN: 6.5.1911</b> <b>YEAR BUILT: 1910</b>	<b>ARCHITECT: Arthur Benison Hubback</b>	<b>ADDRESS: Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.</b>	<b>CAT. NO: 5.3.2</b>
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Isometric View shows overall station building with circulation towers at every corner of the building and vast train-sheds covered both platforms and tracks [75]

<b>NAME:</b> Kuala Lumpur	<b>YEAR OPEN:</b> 6.5.1911 <b>YEAR BUILT:</b> 1910	<b>ARCHITECT:</b> Arthur Benison Hubback	<b>ADDRESS:</b> Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.	<b>CAT. NO:</b> 5.3.3
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**PLAN:**

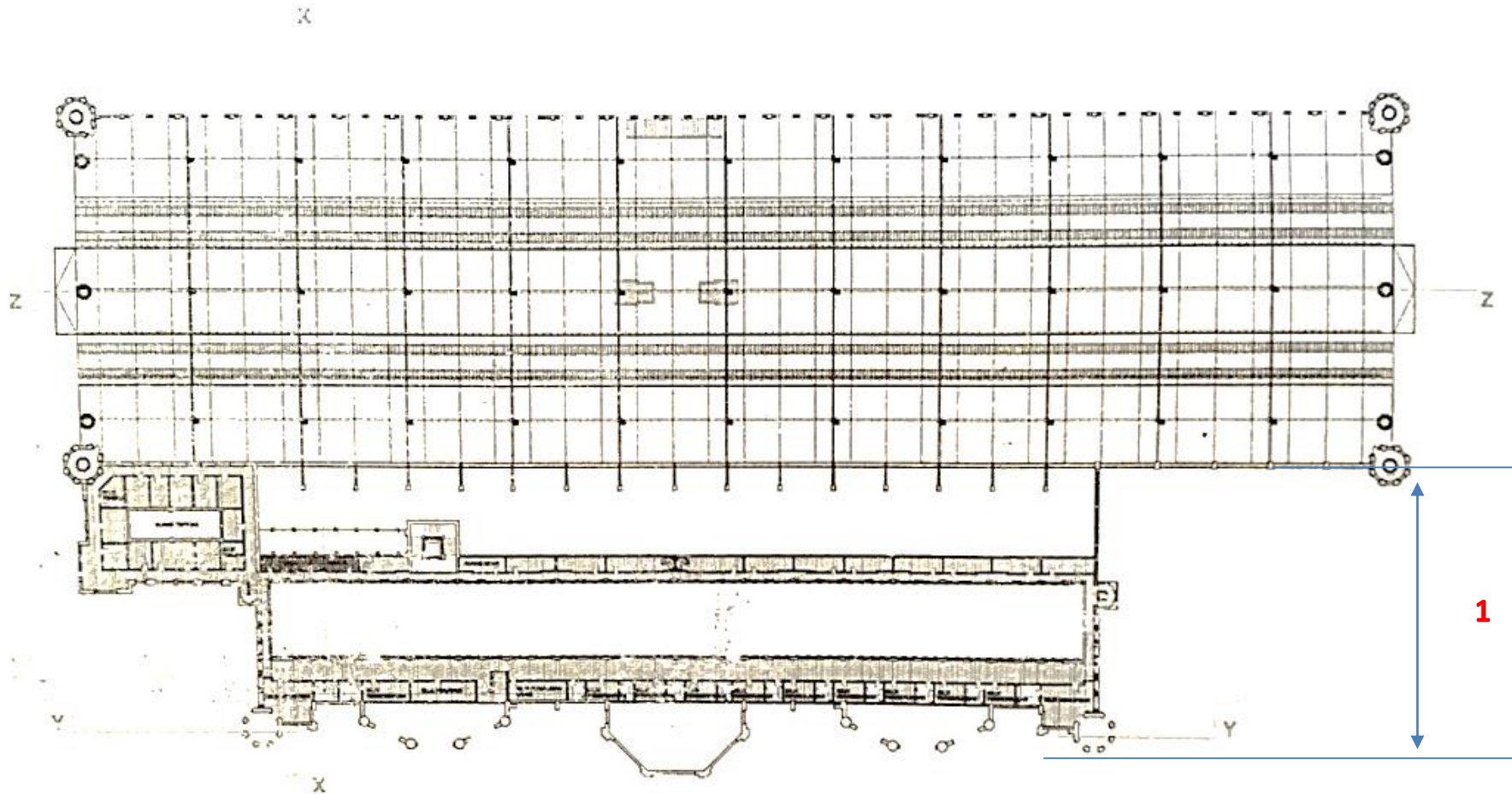


Ground Floor Plan shows the first part is three platforms with four railway tracks and the second part is the station building with rectangular floor plan and projecting porticoes on the main façade [75]



<b>NAME:</b> Kuala Lumpur	<b>YEAR OPEN:</b> 6.5.1911 <b>YEAR BUILT:</b> 1910	<b>ARCHITECT:</b> Arthur Benison Hubback	<b>ADDRESS:</b> Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.	<b>CAT. NO:</b> 5.3.4
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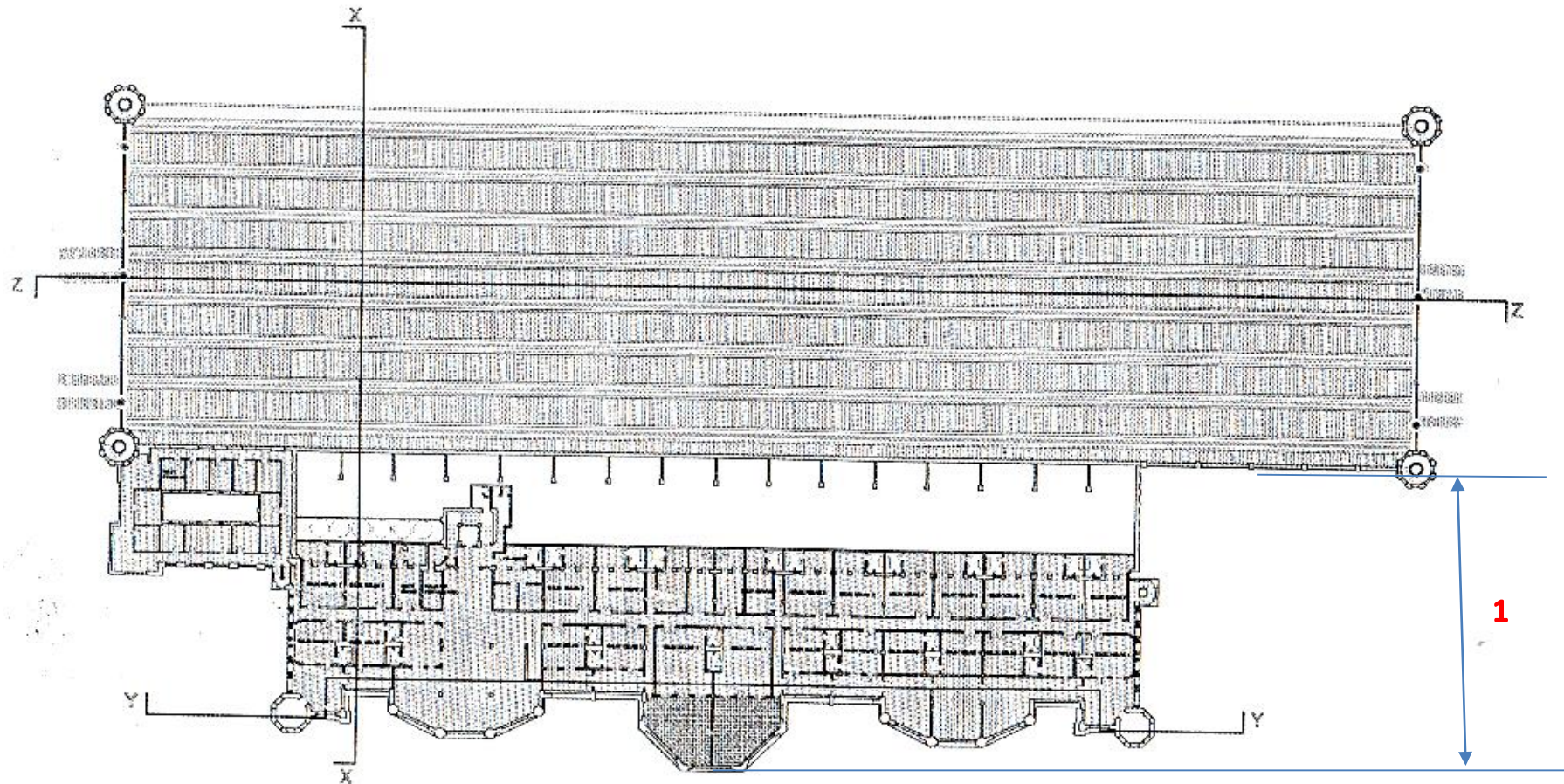
**PLAN:**



The first part shown is the mezzanine floor plan used mostly for bathrooms and toilets area [75]

<b>NAME:</b> Kuala Lumpur	<b>YEAR OPEN:</b> 6.5.1911 <b>YEAR BUILT:</b> 1910	<b>ARCHITECT:</b> Arthur Benison Hubback	<b>ADDRESS:</b> Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.	<b>CAT. NO:</b> 5.3.5
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**PLAN:**

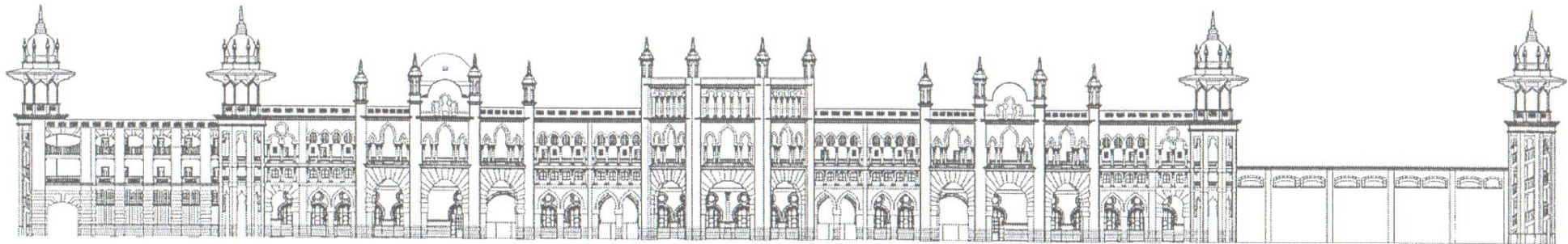


The first part shown the first floor plan shows the hotel area which includes bedrooms, lounge and other facilities [75]

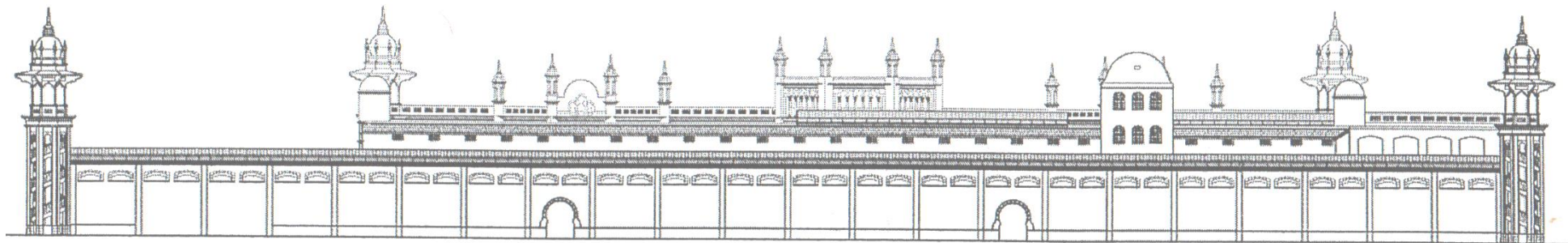


<b>NAME: Kuala Lumpur</b>	<b>YEAR OPEN: 6.5.1911</b> <b>YEAR BUILT: 1910</b>	<b>ARCHITECT: Arthur Benison Hubback</b>	<b>ADDRESS: Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.</b>	<b>CAT. NO: 5.3.6</b>
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**ELEVATIONS:**



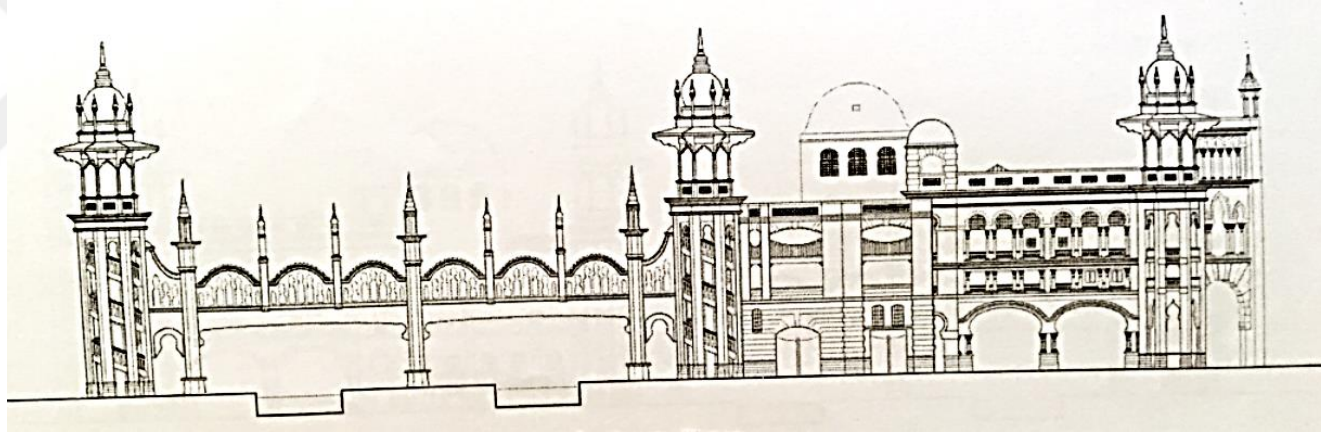
1. Front Elevation shows the main façade which includes three protruding porticoes with Serlian arcades of horseshoe arches on its first floor and pointed horseshoe arches on its second floor, decorative parapet walls on its projecting porticoes and four staircases towers with chattri [75]



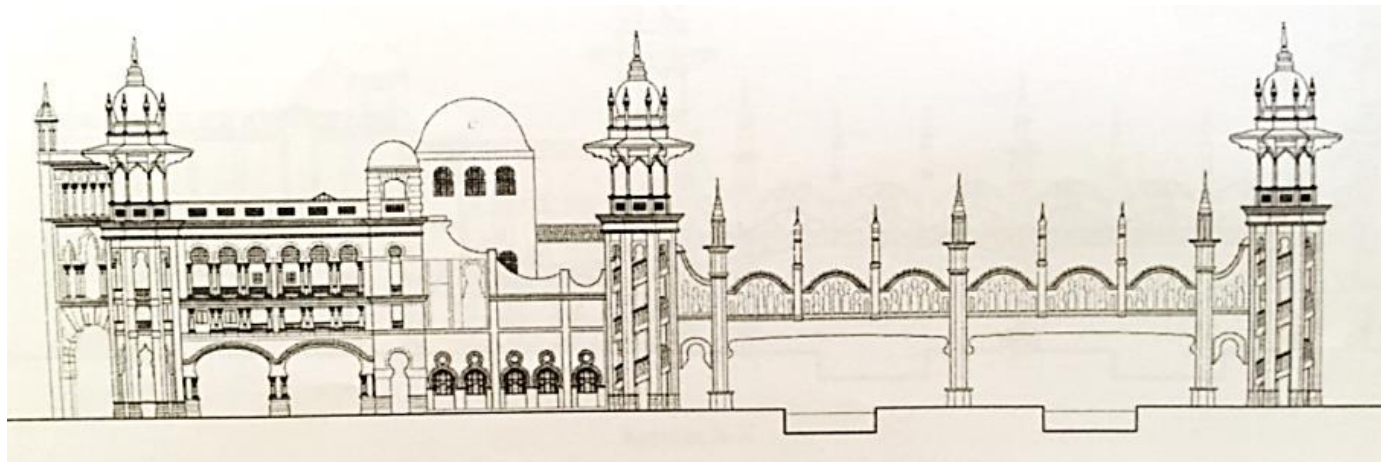
2. Rear Elevation shows the back of the station with a series of small circular arches on its wall [75]

<b>NAME: Kuala Lumpur</b>	<b>YEAR OPEN: 6.5.1911</b> <b>YEAR BUILT: 1910</b>	<b>ARCHITECT: Arthur Benison Hubback</b>	<b>ADDRESS: Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.</b>	<b>CAT. NO: 5.3.7</b>
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**ELEVATIONS:**



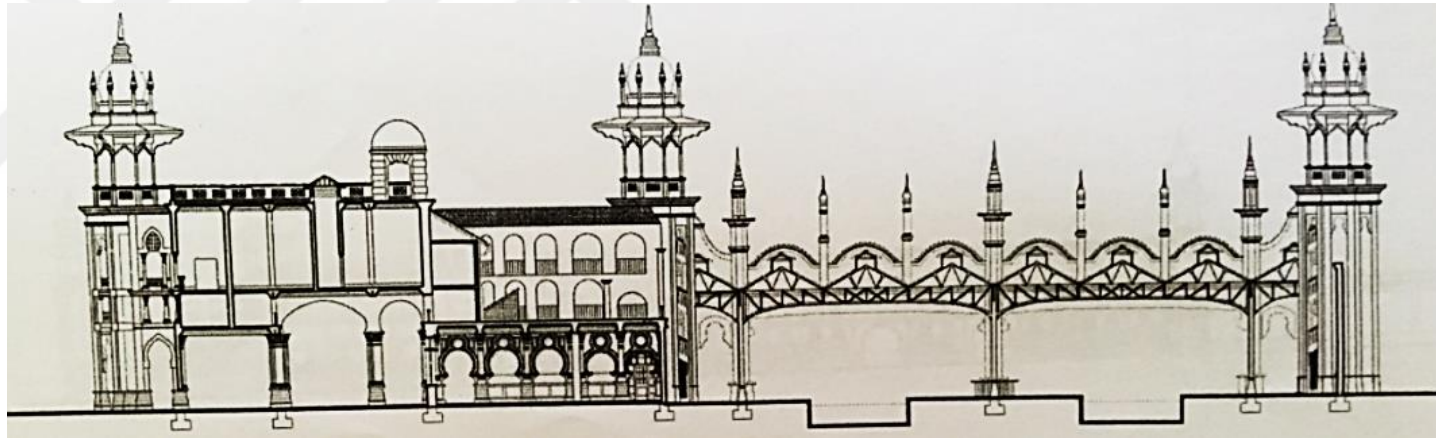
1. West Elevation shows the tracks and its platforms [75]



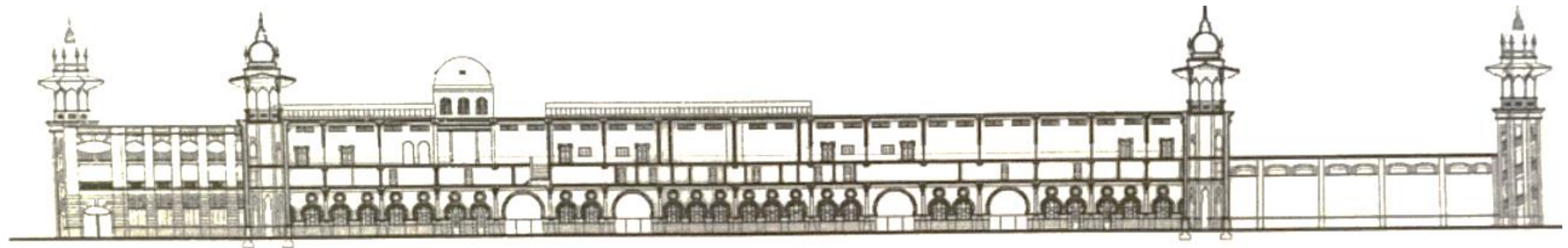
2. East Elevation shows the entranceway, staircases tower with chattris and also the decorative planes to cover the trainsheds [75]

<b>NAME:</b> Kuala Lumpur	<b>YEAR OPEN:</b> 6.5.1911 <b>YEAR BUILT:</b> 1910	<b>ARCHITECT:</b> Arthur Benison Hubback	<b>ADDRESS:</b> Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.	<b>CAT. NO:</b> 5.3.8
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**SECTIONS:**



1. Section X-X shows the train-shed roof structures [75]

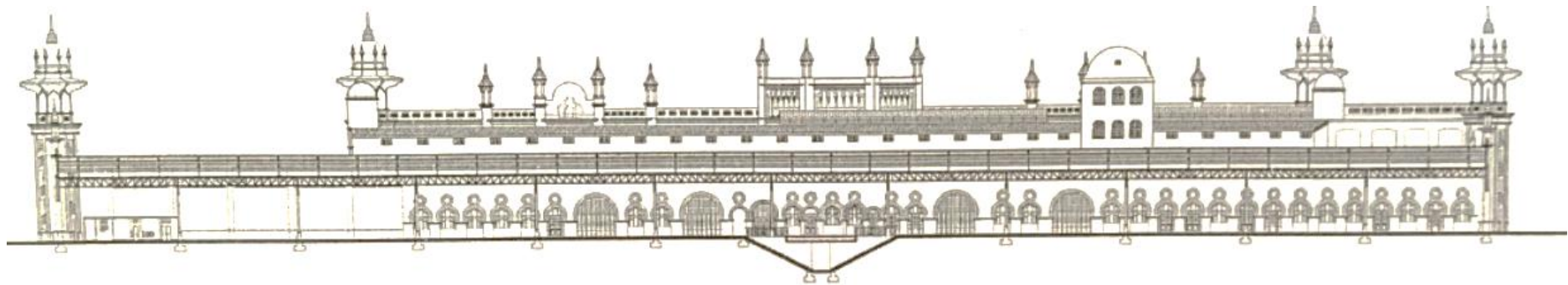


2. Section Y-Y shows a series of horseshoe shaped windows with gables on its façade on the tracks side [75]



<b>NAME: Kuala Lumpur</b>	<b>YEAR OPEN: 6.5.1911</b> <b>YEAR BUILT: 1910</b>	<b>ARCHITECT: Arthur Benison Hubback</b>	<b>ADDRESS: Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.</b>	<b>CAT. NO: 5.3.9</b>
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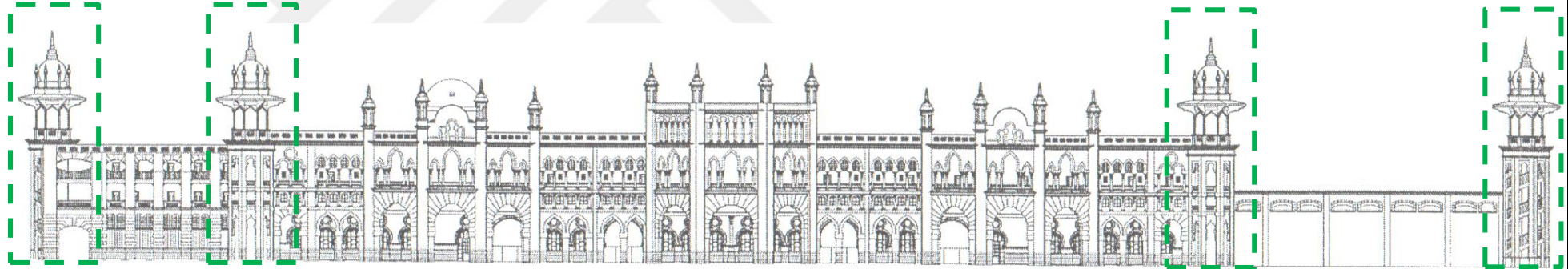
**SECTION:**



1. Section Z-Z shows the longitudinal section cutting through the underground tunnel that connected the platforms [75]



<b>NAME:</b> Kuala Lumpur	<b>YEAR OPEN:</b> 6.5.1911 <b>YEAR BUILT:</b> 1910	<b>ARCHITECT:</b> Arthur Benison Hubback	<b>ADDRESS:</b> Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.	<b>CAT. NO:</b> 5.3.10
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1. Ogee arches on the ground floor.



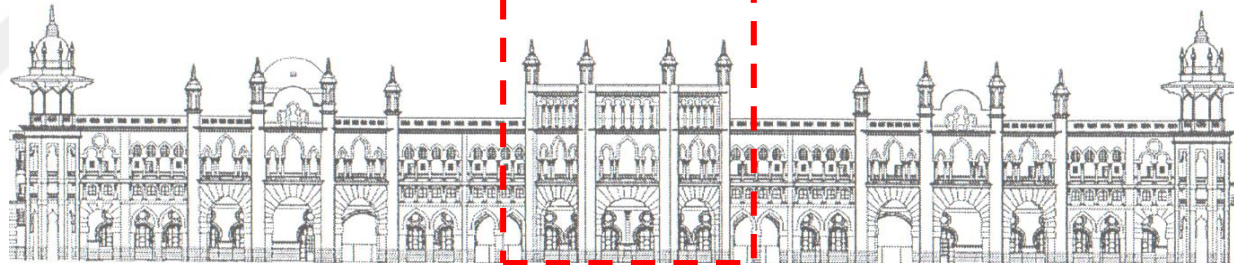
2. The circulation tower with onion dome on top.



3. Octagonal in plan with Muqarnas columns and multifoil arches covered with overhanging roof eaves and onion dome placed on top mounted with finial. The onion domes were surrounded with miniature pinnacle on every edges of the octagonal base.

<b>NAME: Kuala Lumpur</b>	<b>YEAR OPEN: 6.5.1911</b> <b>YEAR BUILT: 1910</b>	<b>ARCHITECT: Arthur Benison Hubback</b>	<b>ADDRESS: Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.</b>	<b>CAT. NO: 5.3.11</b>
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Projecting portico



1. Parapet consists of a series of Muqarnas columns and horseshoe arches forming colonnades. Also a battlements and miniature hexagon chattri at the end of every corner.



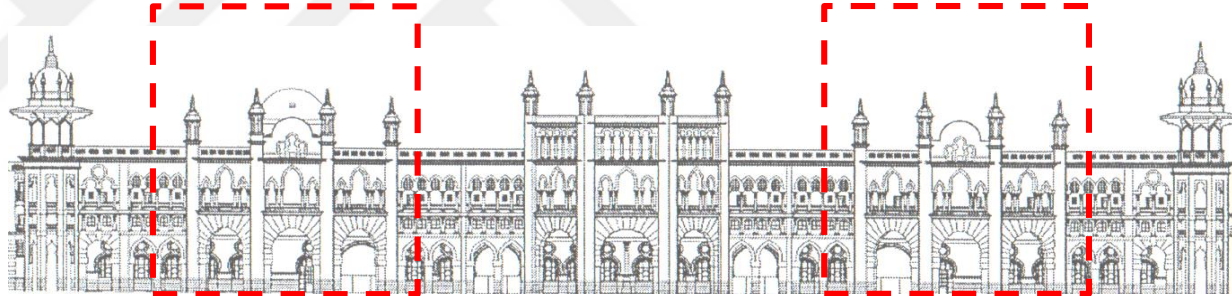
2. Voussoir horseshoe arches on the ground floor, tripartite of pointed horseshoe arches with double Muqarnas columns on the first floor and a parapet wall on the roof top.



3. Balustrades are of a series of octagonal shapes combinations. Tripartite pointed horseshoe arches which the middle one is bigger than both on sides supported with Muqarnas columns. The upper part of the arches was covered with glass.

<b>NAME:</b> Kuala Lumpur	<b>YEAR OPEN:</b> 6.5.1911 <b>YEAR BUILT:</b> 1910	<b>ARCHITECT:</b> Arthur Benison Hubback	<b>ADDRESS:</b> Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.	<b>CAT. NO:</b> 5.3.12
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2 Projecting porticoes



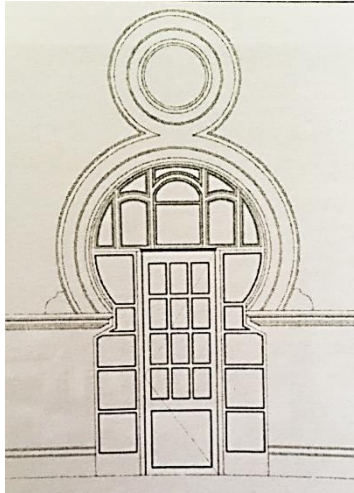
1. Voussoir horseshoe arches on the ground floor, tripartite of pointed horseshoe arches with double Muqarnas columns on the first floor and a parapet wall on the roof top.



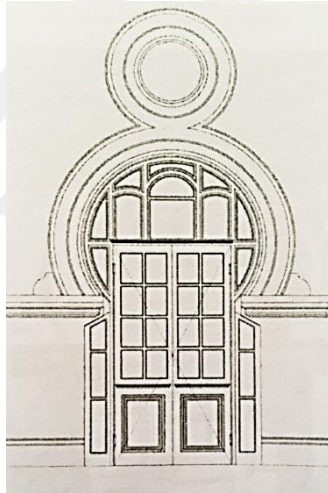
2. Parapet consists of a semicircular and horseshoe arches. It also includes miniature hexagon chattri at the end of every corner of the projecting porticoes.



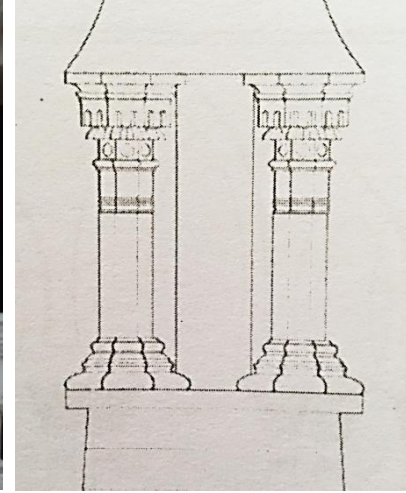
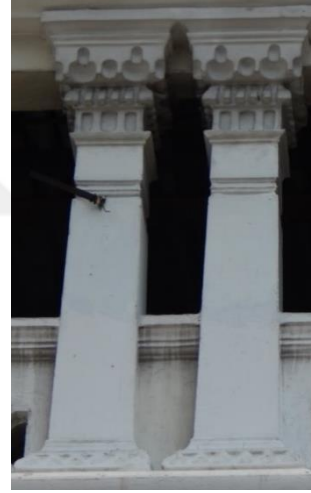
<b>NAME:</b> Kuala Lumpur	<b>YEAR OPEN:</b> 6.5.1911 <b>YEAR BUILT:</b> 1910	<b>ARCHITECT:</b> Arthur Benison Hubback	<b>ADDRESS:</b> Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.	<b>CAT. NO:</b> 5.3.13
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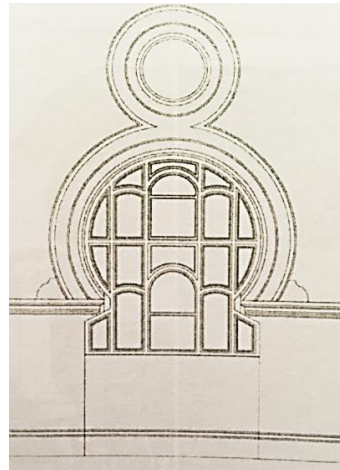
1. Horseshoe shaped single panel door [75]



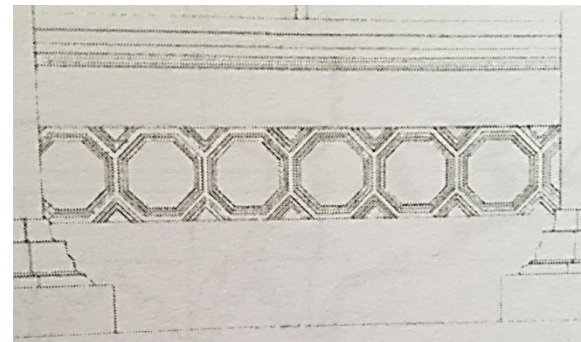
2. Horseshoe shaped double panelled door [75]



3. Double columns of Muqarnas capital [75]



4. Horseshoe shaped windows [75]



5. Series of octagonal shaped balustrades [75]

<b>NAME: Kuala Lumpur</b>	<b>YEAR OPEN: 6.5.1911</b> <b>YEAR BUILT: 1910</b>	<b>ARCHITECT: Arthur Benison Hubback</b>	<b>ADDRESS: Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.</b>	<b>CAT. NO: 5.3.14</b>
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1. Horseshoe arches with double columns of Muqarnas capital were used at the station building.



2. Pointed horseshoe arches.



3. Entrance-way to the station building.



4. Multifoil arches on chatri.



<b>NAME:</b> Kuala Lumpur	<b>YEAR OPEN:</b> 6.5.1911 <b>YEAR BUILT:</b> 1910	<b>ARCHITECT:</b> Arthur Benison Hubback	<b>ADDRESS:</b> Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.	<b>CAT. NO:</b> 5.3.15
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1. Circulation tower mounted with chattri on top.

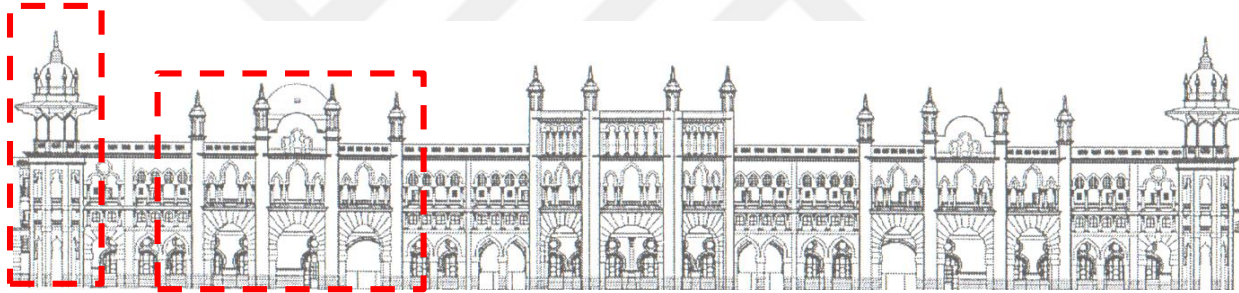


2. Heritage Station Hotel main entrance with wooden horseshoe shaped doors.



3. Ogee arches.

<b>NAME:</b> Kuala Lumpur	<b>YEAR OPEN:</b> 6.5.1911 <b>YEAR BUILT:</b> 1910	<b>ARCHITECT:</b> Arthur Benison Hubback	<b>ADDRESS:</b> Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.	<b>CAT. NO:</b> 5.3.16
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1. The façade shows the staircase tower at both ends of the building and pinnacle or 'guldasta' located at the projecting porticoes [75]



2. Guldasta or pinnacle surrounding the edge of the dome.



3. Pinnacles at the projecting portico.



4. Pinnacle of round shaped in plan but finished with hexagon chatri on top.



<b>NAME:</b> Kuala Lumpur	<b>YEAR OPEN:</b> 6.5.1911 <b>YEAR BUILT:</b> 1910	<b>ARCHITECT:</b> Arthur Benison Hubback	<b>ADDRESS:</b> Kuala Lumpur Station, No. 36, Jalan Sultan Hishamuddin, 50050 Kuala Lumpur.	<b>CAT. NO:</b> 5.3.17
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1. Horseshoe-shaped windows.



2. View towards the island platform.





3. Train coming thru the tracks.





4. View towards the side entrance.

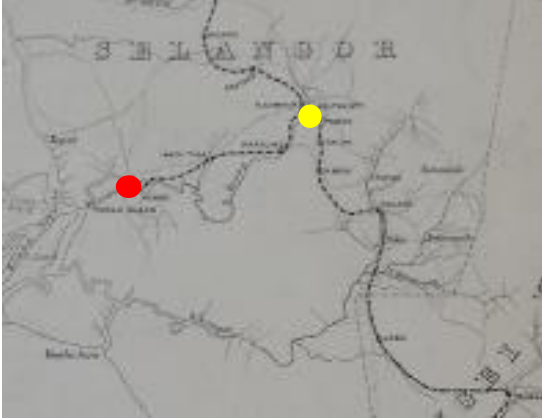


5. The dropping off entrance.

<b>NAME:</b> Pataling	<b>YEAR OPEN:</b> 15.9.1886 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Pataling Station, Kuala Lumpur.	<b>CAT. NO:</b> 6
 <p>Map 6 The red dot on FMSR Construction Map dated August 1898 show Pataling Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 15 Pataling Station [76]</p>		
<p><b>BUILDING HISTORY;</b> Pataling station (red dot in map) was opened on 15<sup>th</sup> September 1886 and one of the station from Kuala Lumpur – Klang (Bukit Kuda) route (yellow dots in map).</p>		<p><b>PLAN:</b>  No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b>  No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Demolished.</p>		<p><b>BUILDING DESCRIPTION:</b>  According to the picture shown, the station building used hip-gabled roofs and overhanging roof eaves with decorative fascia boards.</p>		

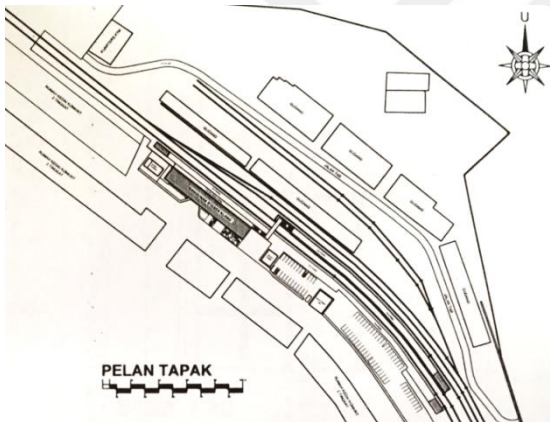
<b>NAME:</b> Batu Tiga	<b>YEAR OPEN:</b> 15.9.1886 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Batu Tiga Station, Selangor.	<b>CAT. NO:</b> 7
 <p>Map 7 The red dot on FMSR Construction Map dated August 1898 show Batu Tiga Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 16 Batu Tiga Station [77]</p>		
<p><b>BUILDING HISTORY;</b> Batu Tiga station (red dot in map) was opened on 15<sup>th</sup> September 1886 and one of the stations from Kuala Lumpur – Klang (Bukit Kuda) route (yellow dots in map).</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Demolished.</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>According to the photo shown, it can be seen that the station having a rectangular floor plan covered with gable roofs. The overhanging roof eaves were supported by timber columns to cover the platform. It was a timber station building.</p>		



<b>NAME:</b> Bukit Kuda	<b>YEAR OPEN:</b> 15.9.1886 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Bukit Kuda Station, 41000, Klang Selangor.	<b>CAT. NO:</b> 8.1
 <p>Map 8.1 The red dot on FMSR Construction Map dated August 1898 show Bukit Kuda Klang Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>The station (refer to red dot in map) was opened on 15<sup>th</sup> September 1886 and one of the station from Kuala Lumpur – Klang (Bukit Kuda) route (refer to yellow dots in map).</p> <p><b>CURRENT SITUATION:</b> Demolished.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
		<p><b>BUILDING DESCRIPTION:</b></p> <p>No descriptions.</p>		

<b>NAME:</b> Klang	<b>YEAR OPEN:</b> 15.9.1890 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Klang Station, Jalan Raya Timur Off Jalan Stesen, 41000, Klang Selangor.	<b>CAT. NO:</b> 8.2
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**PHOTOGRAPHS:**



Map 8.2 Location Plan [78]

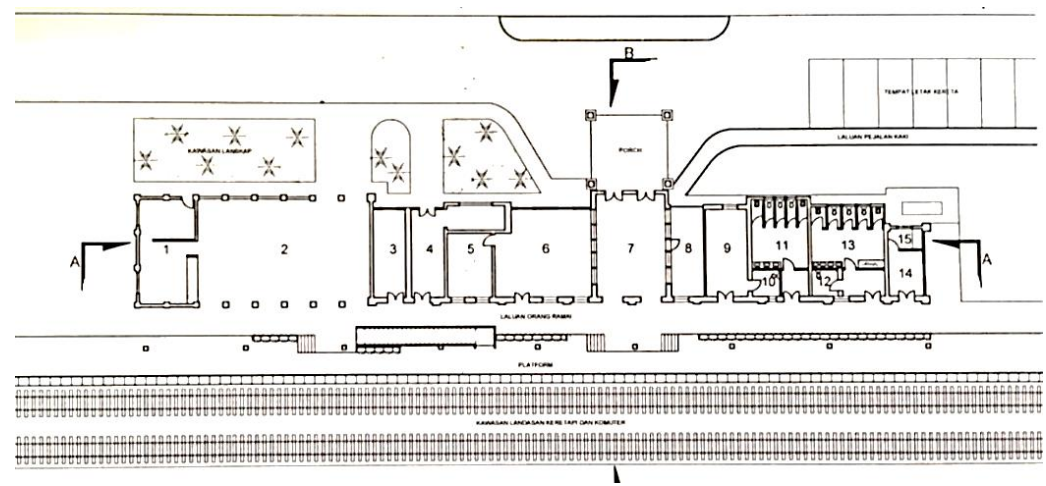


Image 18 Image of Klang Station (Malaysia National Archives, 2015)

**BUILDING HISTORY;**  
Klang Station was built around 1890's but it has undergone numerous renovation works after that time. It was constructed to replace the original Bukit Kuda Station, which was three miles away from Klang town.

**CURRENT SITUATION:** Changed to KTM Komuter line.

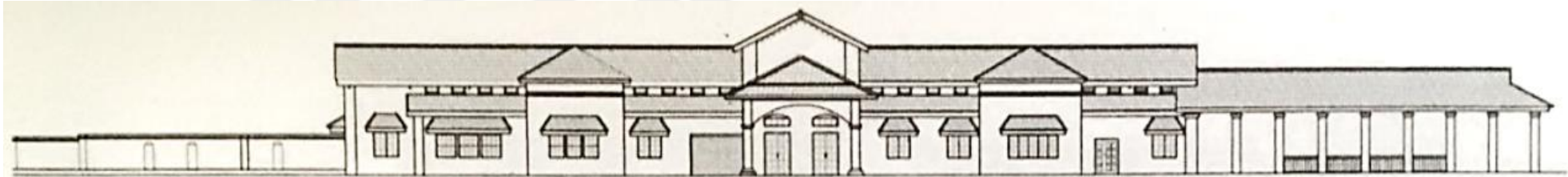
**PLAN:**



Ground Floor Plan shows the rectangular floor plan with projecting porticoes [78]

<b>NAME: Klang</b>	<b>YEAR OPEN: 15.9.1890</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Klang Station, Jalan Raya Timur</b> Off Jalan Stesen, 41000, Klang Selangor.	<b>CAT. NO: 8.2.1</b>
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**ELEVATIONS:**



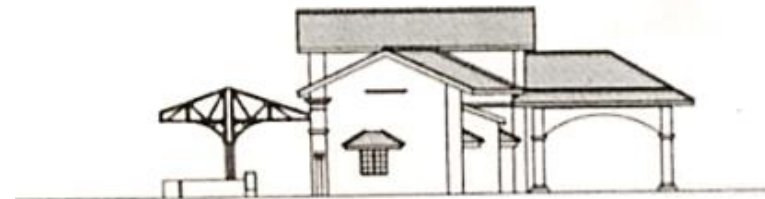
1. Front Elevation shows the symmetrical façade of the station building with the main gable roof intersecting with combinations of hipped and gable roofs, [78]



2. Rear Elevation shows the façade from the tracks with series of casement windows, [78]



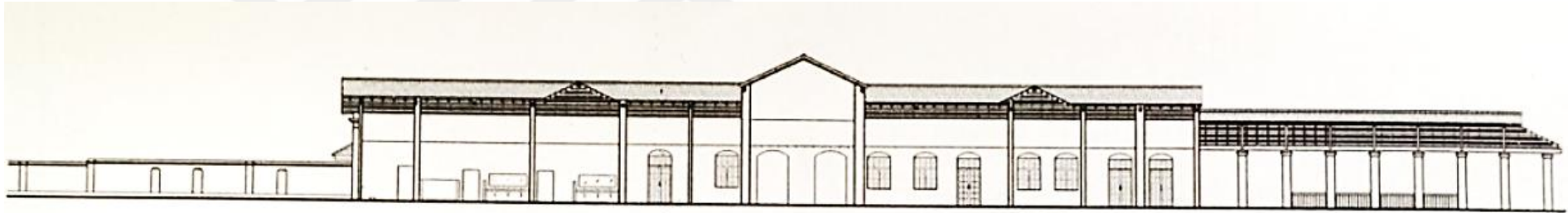
3. East Elevation shows the entrance porch, main building and its platform with train-shed, [78]



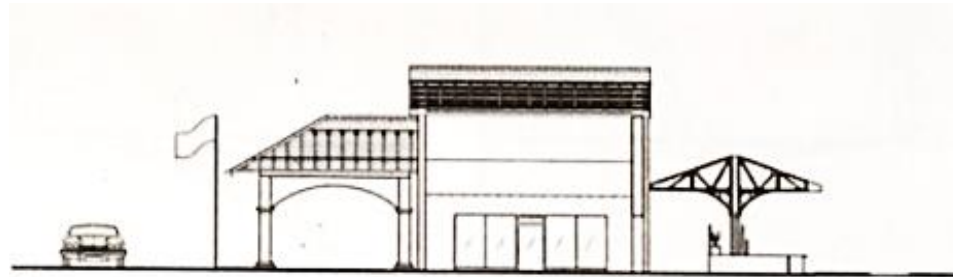
4. West Elevation shows butterfly train-shed, [78]

<b>NAME: Klang</b>	<b>YEAR OPEN: 15.9.1890</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Klang Station, Jalan Raya Timur Off Jalan Stesen, 41000, Klang Selangor.</b>	<b>CAT. NO: 8.2.2</b>
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**SECTIONS:**



1. Longitudinal Section shows the interior view with windows and doors having an upper part for ventilations [78]





2. Section B-B shows the roof structures of the porch, station building and its train-shed [78]



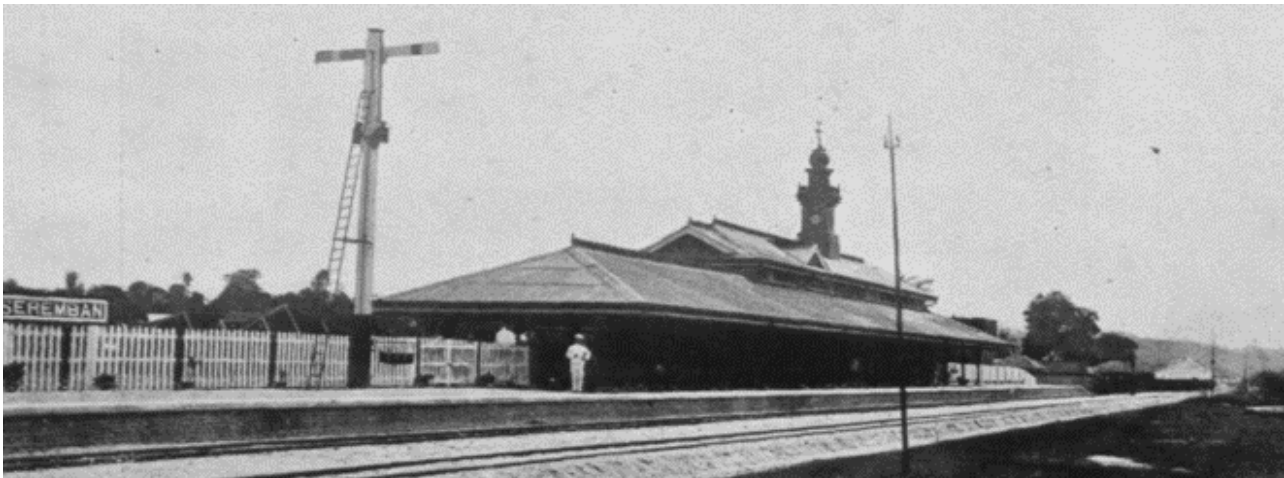
**BUILDING DESCRIPTION:**

The one storey station building having rectangular building plan. The station used gable roofs, hipped roofs and hip gable roof as its roof combinations. It has entrance portico for picking up and dropping off passengers. It has a symmetrical façade.



<b>NAME:</b> <b>Kamunting</b>	<b>YEAR OPEN: 6.5.1890</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS:</b> Kamunting Station, 85 Lorong KB4, Kamunting, 34600, Perak.	<b>CAT. NO: 9</b>
 <p>Map 9 The red dot on FMSR Construction Map dated August 1898 show Kamunting Station [63]</p>		<b>PHOTOGRAPHS:</b>  <p>Image 19 Closed and abandoned station [79]</p>		
<b>BUILDING HISTORY;</b> Kamunting Station (red dot on map) was opened on 6 <sup>th</sup> May 1890 which connected from Taiping Station. The distance between the two stations, 3.5miles.		<b>PLAN:</b>  No old plans and drawings could be found.	<b>MAIN FAÇADE:</b>  No pictures found.	
<b>CURRENT SITUATION:</b> Demolished.		<b>BUILDING DESCRIPTION:</b>  According to the photo shown above, the station building has a rectangular building plan covered with hipped roof. It might cater only office area and ticketing office and the waiting area is an open area outside as you can see there is a bench. Also can be seen the application of four sets of double panels windows with upper part ventilations on top of each windows.		



<b>NAME:</b> Seremban	<b>YEAR OPEN:</b> July 1891 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Seremban Station, Negeri Sembilan.	<b>CAT. NO:</b> 10
 <p>Map 10 The red dot on FMSR Construction Map on the year 1919 show Seremban Station (Malaysia National Archives)</p>		<b>PHOTOGRAPHS:</b>  <p>Image 20 Panoramic view of the station [80]</p>		
<b>BUILDING HISTORY;</b> Seremban Station (red dot on map) was opened on July 1891, connected to Port Dickson Station (yellow dot on map).  <b>CURRENT SITUATION:</b> Still in Operation.		 <p>Image 21 View of the station in the early years [76]</p>		

<b>NAME:</b> Seremban	<b>YEAR OPEN:</b> July 1891 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Seremban Station, Negeri Sembilan.	<b>CAT. NO:</b> 10.1.1
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**PHOTOGRAPHS:**



Image 22 View of the station in 2015

**PLAN:** No old plans and drawings were found.

**MAIN FAÇADE:** No pictures found.

**BUILDING DESCRIPTION:**

The one-storey station of a rectangular building plan. The station building accommodates station offices at the southern half of the station, and ticketing facilities and the passenger concourse in the northern half of the building; a brick-and-plaster entranceway was also included. The station features verandah supported by carved wooden beams. The station is covered by two layers of hipped roofs: One at the bottom cut at the top by a smaller one with a large gable. A white clock tower is erected atop the roof of the building, topped by an onion dome. The top of the roof is adorned by wooden carvings and small pinnacles on its upper ends.



<b>NAME:</b> Seremban	<b>YEAR OPEN:</b> July 1891 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Seremban Station, Negeri Sembilan.	<b>CAT. NO:</b> 10.1.2
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**PHOTOGRAPHS:**



1. The clock tower with onion dome topped with moon shaped finial influences from Islamic Turkish architecture






2. Wooden column with decorative spandrels,




3. The entrance porch





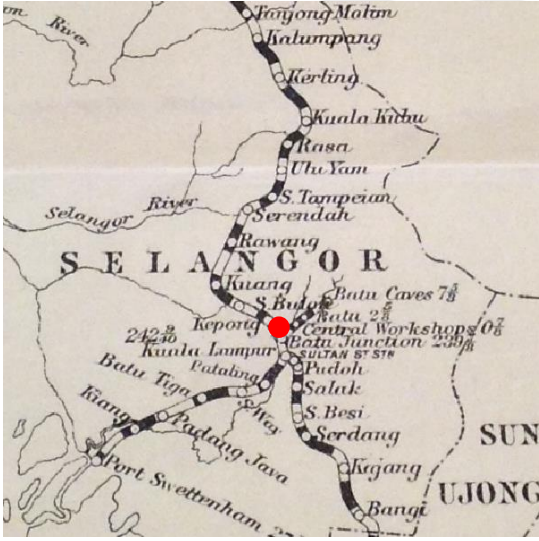
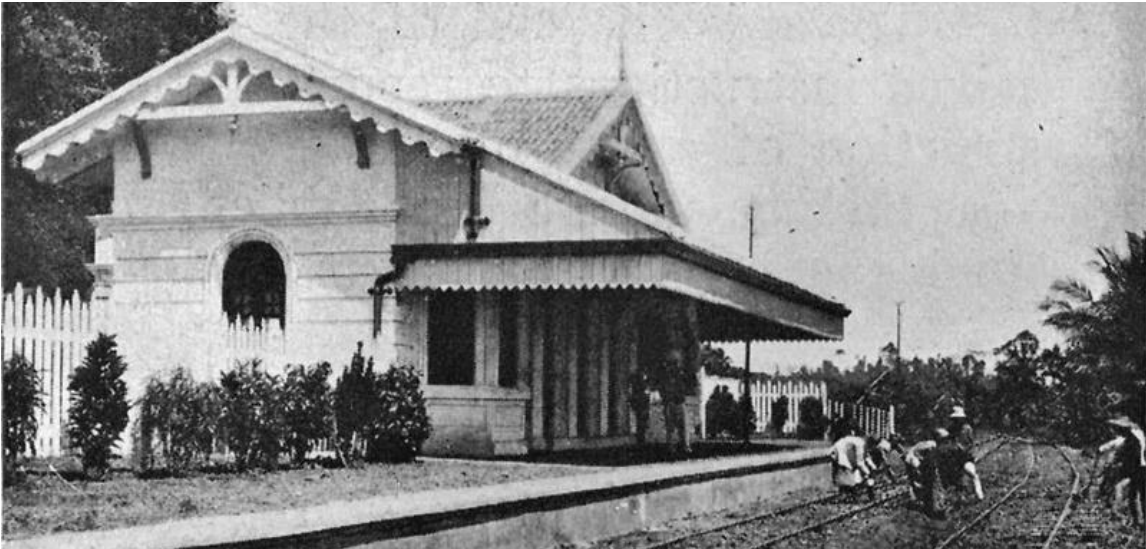
4. The steel columns and timber panel coverings as trains-shed

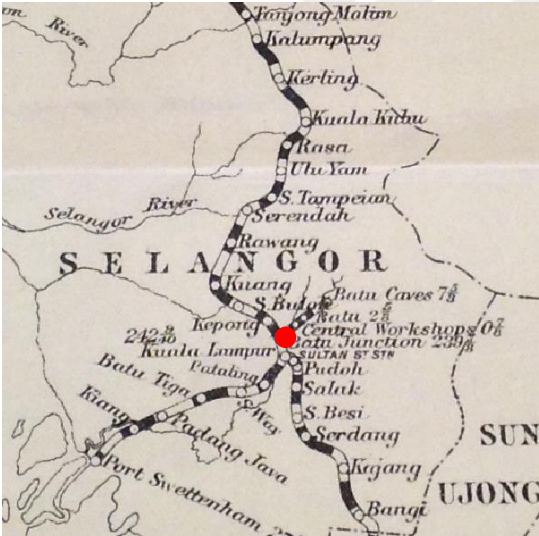
<b>NAME:</b> Port Dickson	<b>YEAR OPEN:</b> July 1891 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Stesen Port Dickson, Negeri Sembilan.	<b>CAT. NO:</b> 11
 <p>Map 11 The red dot on FMSR Construction Map on the year 1919 show Port Dickson Station (Malaysia National Archives)</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 23 Closed and abandoned station [79]</p>  <p>Image 24 2017, currently preoccupied with other company, [69]</p>		
<p><b>BUILDING HISTORY;</b> Port Dickson (red dot on map) was opened on July 1891, connected to Seremban Station (yellow dot on map).</p>		<p><b>PLAN:</b> No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b> No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Occupied with other purpose, looks run down.</p>		<p><b>BUILDING DESCRIPTION:</b> According to the photo shown above, it was a rectangular building plan with double gable roofs. It also has added a blue porch attached on the left hand side. Two same columns supporting the second layer of the roof.</p>		


<b>NAME:</b> Krian Road	<b>YEAR OPEN:</b> 1.7.1892 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Krian Road Station, Perak.	<b>CAT. NO:</b> 12
 <p>Map 12 The red dot on FMSR Construction Map dated August 1898 show Krian Road Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found</p>		
<p><b>BUILDING HISTORY;</b> Krian Road Station (red dot on map) was opened on 1<sup>st</sup> July 1892 between the lines from Kamunting Station to Ulu Sepetang Station.</p> <p><b>CURRENT SITUATION:</b> Demolished.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		

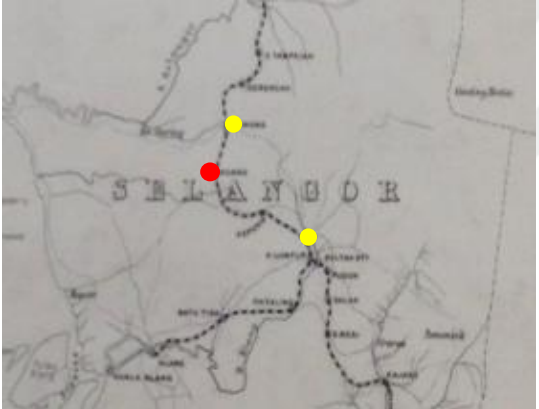



<b>NAME:</b> Ulu Sepetang	<b>YEAR OPEN:</b> 1.7.1892 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Ulu Sepetang Station, Perak.	<b>CAT. NO:</b> 13
 <p>Map 13 The red dot on FMSR Construction Map dated August 1898 show Ulu Sepetang Station [63]</p>		<b>PHOTOGRAPHS:</b>  <p>Image 25 View of the shed and Ulu Sepetang Station [5]</p>		
<b>BUILDING HISTORY;</b> Ulu Sepetang Station was opened on 1 <sup>st</sup> July 1892 connecting the line from Kamunting Station.		<b>PLAN:</b>  No old plans and drawings could be found.	<b>MAIN FAÇADE:</b>  No pictures found.	
<b>CURRENT SITUATION:</b> Demolished.		<b>BUILDING DESCRIPTION:</b>  According to the photo shown above, it was a rectangular building plan with gabled roof.		



<b>NAME:</b> Resident	<b>YEAR OPEN:</b> 7.11.1892 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Resident Station, Kuala Lumpur.	<b>CAT. NO:</b> 14
 <p>Map 14 The red dot on FMSR Map dated 1903 show Resident Station [81]</p>		<b>PHOTOGRAPHS:</b>  <p>Image 26 Resident Station circa 1891[71]</p>		
<b>BUILDING HISTORY;</b> Resident Station was opened on 7 <sup>th</sup> November 1892. It was located near the British Resident House. This station was for the Governor private use. The red dot on map shows this station.  <b>CURRENT SITUATION:</b> Demolished.		<b>PLAN:</b>  According to the 1890s photo above can be seen that the probability of station building has a rectangular plan.	<b>MAIN FAÇADE:</b>  No pictures found.	
		<b>BUILDING DESCRIPTION:</b>  According to the 1891 photo shown above can be seen that the station building having a combination of ‘bumbung panjang’ or gable roofs interlocking with each other and additional verandah system. The roof also has a finial on top of its edge. The overhanging roof eaves having a ‘papan cantik’ or decorative fascia boards. It also shows a circular arch window on its wall.		




<b>NAME:</b> Batu Junction	<b>YEAR OPEN:</b> 7.11.1892 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Batu Junction Station, Kuala Lumpur.	<b>CAT. NO:</b> 15
 <p>Map 5.1 The red dot on FMSR Map dated 1903 show Batu Junction Station [81]</p>		<b>PHOTOGRAPHS:</b>  <p style="text-align: center;">No pictures found.</p>		
<b>BUILDING HISTORY;</b> Batu Junction Station was opened on 7 <sup>th</sup> November 1892 for the Kuala Lumpur – Batu Junction line.		<b>PLAN:</b>  <p style="text-align: center;">No old plans and drawings could be found.</p>	<b>MAIN FAÇADE:</b>  <p style="text-align: center;">No pictures found.</p>	
<b>CURRENT SITUATION:</b> Demolished.		<b>BUILDING DESCRIPTION:</b>  <p style="text-align: center;">No description.</p>		


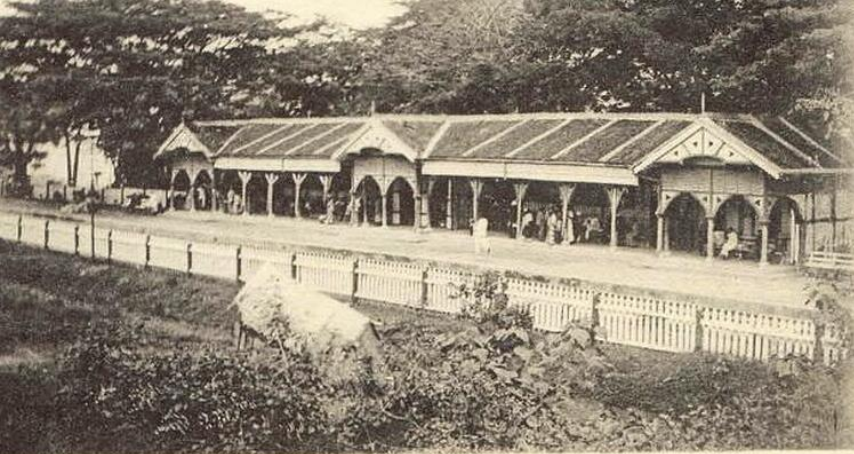
<b>NAME: Kepong</b>	<b>YEAR OPEN:</b> 7.11.1892 <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Kepong Station, Selangor.</b>	<b>CAT. NO: 16</b>
 <p>Map 16 The red dot on FMSR Construction Map dated August 1898 show Kepong Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found</p>		
<p><b>BUILDING HISTORY;</b> Kepong Station (red dot on map) was opened on 7<sup>th</sup> November 1892 for the Batu Junction – Rawang line (yellow dots on map).</p> <p><b>CURRENT SITUATION:</b> Demolished</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		



<b>NAME:</b> Kuang	<b>YEAR OPEN:</b> 7.11.1892 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Kuang Station, Selangor.	<b>CAT. NO:</b> 17
 <p>Map 17 The red dot on FMSR Construction Map dated August 1898 show Kuang Station [63]</p>		<b>PHOTOGRAPHS:</b>  <p>Image 27 Kuang Station circa 1915s' [82]</p>		
<b>BUILDING HISTORY;</b> Kuang Station (red dot on map) was opened on 7 <sup>th</sup> November 1892 for the Batu Junction – Rawang line (yellow dots on map).  <b>CURRENT SITUATION:</b> Demolished		<b>PLAN:</b>  No old plans and drawings could be found.	<b>MAIN FAÇADE:</b>  No pictures found.	
		<b>BUILDING DESCRIPTION:</b>  According to the 1915 photo shown above, the station building was rectangular in plan covered with gable roof. Also can be seen, decorative fascia boards were put around the roof eaves.		



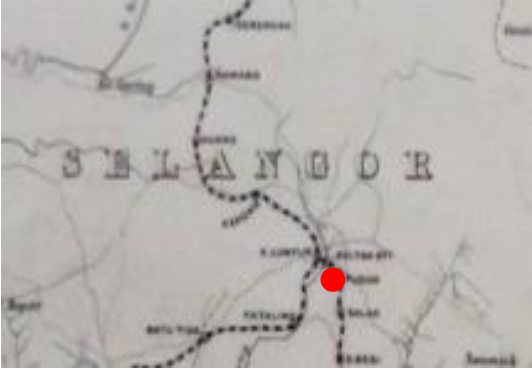

<b>NAME:</b> Rawang	<b>YEAR OPEN:</b> 7.11.1892 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Rawang Station, Selangor.	<b>CAT. NO:</b> 18.1
 <p>Map 18.1 The red dot on FMSR Construction Map dated August 1898 show Rawang Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 28 Image of the old station.</p>		
<p><b>BUILDING HISTORY;</b> Rawang Station (red dot on map) was opened on 7<sup>th</sup> November 1892 for the Batu Junction – Rawang line (yellow dots on map).</p> <p><b>CURRENT SITUATION:</b> Old station closed and rebuilt in 1995.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description</p>		

<b>NAME: Rawang</b>	<b>YEAR OPEN: 1995</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Rawang Station, Selangor.</b>	<b>CAT. NO: 18.2</b>
 <p>Map 18.2 Rawang Station Location Map [83]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 29 Image of the new station</p>  <p>Image 30: Entrance view of the station</p>		
<p><b>BUILDING INFORMATION;</b></p> <p>Rawang Station has been rebuilt and electrified in 1995. It served KTM Komuter of the Port Klang Line since 2015.</p> <p><b>CURRENT SITUATION:</b> In Operation</p>				

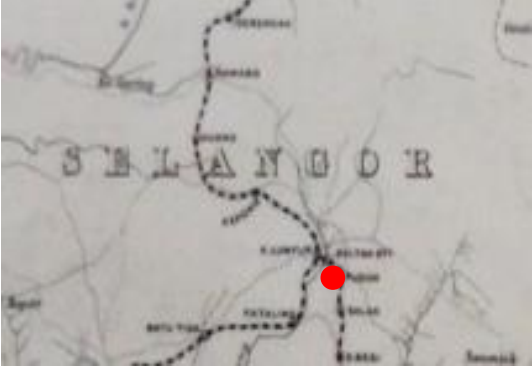

<b>NAME:</b> Sultan Street	<b>YEAR OPEN:</b> 1.6.1893 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Sultan Street Station,	<b>CAT. NO:</b> 19.1
 <p>Map 4 The red dot on Federated Malay States; Town of Kuala Lumpur, Selangor Map dated 1908 show Sultan Street Station [84]</p>		<b>PHOTOGRAPHS:</b>  <p>Railway Station, Sultan Street, Kuala Lumpur.</p> <p>Image 31 Sultan Street station [85]</p>		
<b>BUILDING HISTORY;</b> Sultan Street station was built together with the Kuala Lumpur – Pudu Railway Line. The station was closed when the new Kuala Lumpur Station was built.		<b>PLAN:</b>  No old plans and drawings could be found.	<b>MAIN FAÇADE:</b>  No pictures found.	
<b>CURRENT SITUATION:</b> Demolished.		<b>BUILDING DESCRIPTION:</b>  According to the photo above, it can be seen that the station building probability of a rectangular shaped plan and made of timber. It has applied a combination of gable roofs. It is a symmetrical façade and on its three protruding porch can be seen finials.		

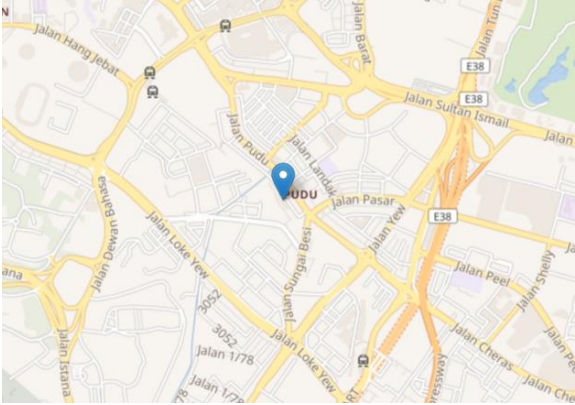

<b>NAME:</b> Sultan Street	<b>YEAR OPEN:</b> 195? <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Sultan Street Station,	<b>CAT. NO:</b> 19.2
 <p>Map 4 The red dot on Federated Malay States; Town of Kuala Lumpur, Selangor Map dated 1908 show Sultan Street Station [84]</p>		<b>PHOTOGRAPHS:</b>  <p>Image 32 Sultan Street station in 1950 [71]</p>		
<b>BUILDING HISTORY;</b> Sultan Street station was built together with the Kuala Lumpur – Pudu Railway Line. The station was closed when the new Kuala Lumpur Station was built.		<b>PLAN:</b>  No old plans and drawings could be found.	<b>MAIN FAÇADE:</b>  No pictures found.	
<b>CURRENT SITUATION:</b> Demolished.		<b>BUILDING DESCRIPTION:</b>  According to the 1950 photo shown above, it can be seen that the station is of rectangular shape in plan covered with hip gabled roof.		






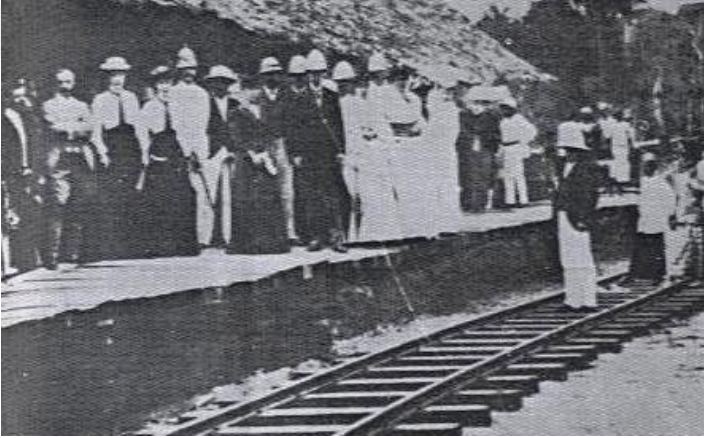
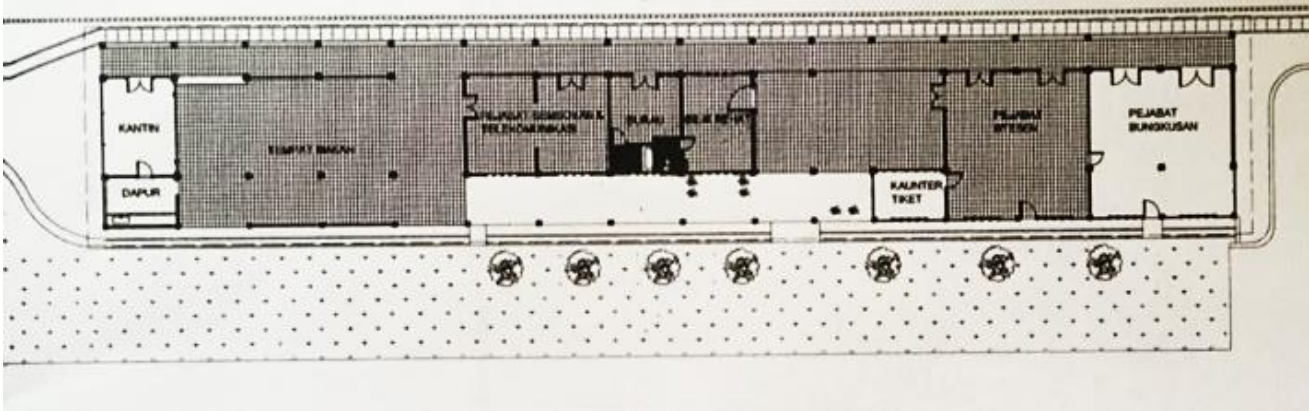
<b>NAME: Pudoh / Pudu</b>	<b>YEAR OPEN: 1.6.1893</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Pudoh Station, Foch Avenue, Selangor.</b>	<b>CAT. NO: 20.1</b>
 <p>Map 20.1 The red dot on FMSR Construction Map dated August 1898 show Pudoh Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 33 Pudoh Station [76]</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Pudoh Station was opened on 1<sup>st</sup> June 1893 connected from Kuala Lumpur Station.</p> <p><b>CURRENT SITUATION:</b> Demolished</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
		<p><b>BUILDING DESCRIPTION:</b></p> <p>According to the photo shown above, the station building was made of timber and covered with gable roofs.</p>		



<b>NAME:</b> Pudoh / Pudu	<b>YEAR OPEN:</b> 19?? <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Pudoh Station, Foch Avenue, Selangor.	<b>CAT. NO:</b> 20.2
 <p>Map 20.1 The red dot on FMSR Construction Map dated August 1898 show Pudoh Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 34 Pudoh Station taken in August 1978 [76]</p>		
<p><b>BUILDING HISTORY;</b> This station was demolished to give way to the new construction of light railway system.</p>		<p><b>PLAN:</b>  No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b>  No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Demolished during 1990s</p>		<p><b>BUILDING DESCRIPTION:</b>  According to the photo shown above, the station has an entrance porch and it has quoins at the corner of the porch, and using double hipped roof intersecting with gable roof as the front façade.</p>		

<b>NAME: Pudu</b>	<b>YEAR OPEN: 16.12.1996</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Pudu Station, Jalan Sarawak, Pudu, Kuala Lumpur, Malaysia</b>	<b>CAT. NO: 20.3</b>
 <p>Map 20.2 The blue pin show Pudu Station (Google Map, 20 April 2017)</p>		<b>PHOTOGRAPHS:</b>  <p>Image 35 New Pudu Station</p>		
<b>BUILDING INFORMATION;</b>  Pudu Station was opened on 16 <sup>th</sup> December 1996 connected from Hang Tuah Station.  <b>CURRENT SITUATION:</b> In Operation as LRT Station.				

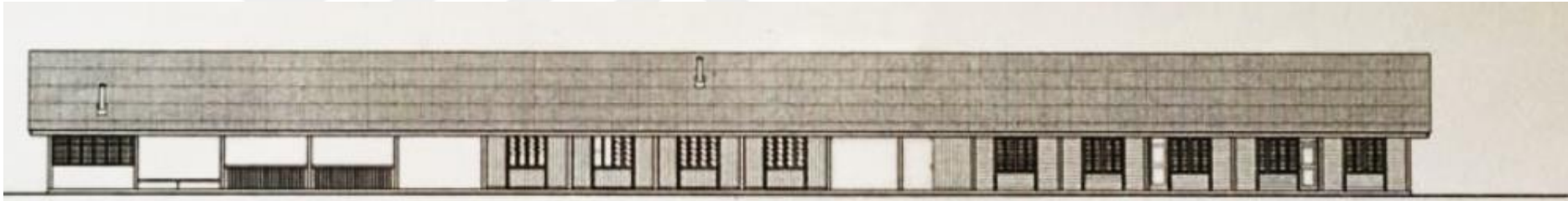
<b>NAME:</b> Serendah	<b>YEAR OPEN:</b> 10.7.1893 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Serendah Station, Jalan Ipoh, 48200 Serendah, Selangor.	<b>CAT. NO:</b> 21
 <p>Map 21 The red dot on FMSR Construction Map dated August 1898 show Serendah Station [63]</p>		<b>PHOTOGRAPHS:</b>  <p>Image 36 View from the track [76]</p>		
<b>BUILDING HISTORY;</b>  Serendah Station was opened on 10 <sup>th</sup> July 1893 connecting from Rawang Station.	<b>PLAN:</b>  No old plans and drawings were found.	<b>MAIN FAÇADE:</b>  No pictures found.		
<b>CURRENT SITUATION:</b> Demolished.	<b>BUILDING DESCRIPTION:</b>  According to the photo shown above, the station has an entrance porch and it has quoins at the corner of the main building, and using gable roof. The adjacent building looks like a wooden building.			

<b>NAME:</b> Tapah Road <b>Road</b>	<b>YEAR OPEN:</b> 6.9.1893 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Tapah Road Station, Jalan Stesen, 35400 Tapah, Perak.	<b>CAT. NO:</b> 22.1
 <p>Map 22.1 The red dot on FMSR Construction Map dated August 1898 show Tapah Road Station [63]</p>		<b>PHOTOGRAPHS:</b>  <p>Image 37 At the opening of the station in 1893 [5]</p>		
<b>BUILDING HISTORY;</b>  Tapah Road Station was opened on 6 <sup>th</sup> September 1893.  <b>CURRENT SITUATION:</b> Closed and Preserved.		<b>PLAN:</b>  <p>Station Plan shows rectangular floor plan with station office, ticket office, canteen, prayer room and postage room, [86]</p>		

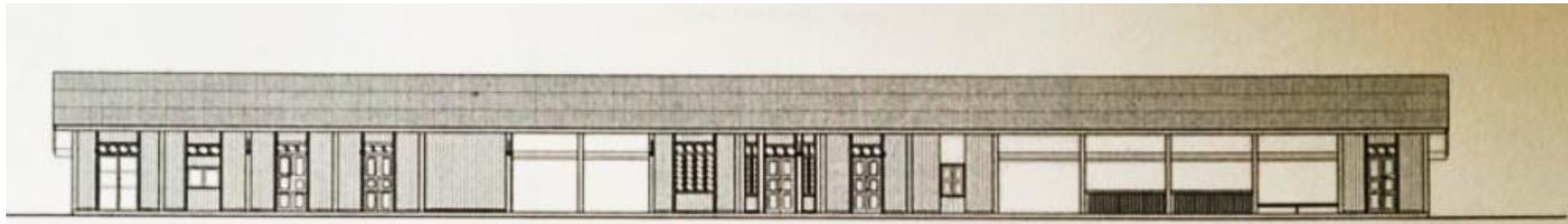


<b>NAME:</b> Tapah Road	<b>YEAR OPEN:</b> 6.9.1893 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Tapah Road Station, Jalan Stesen, 35400 Tapah, Perak.	<b>CAT. NO:</b> 22.1.1
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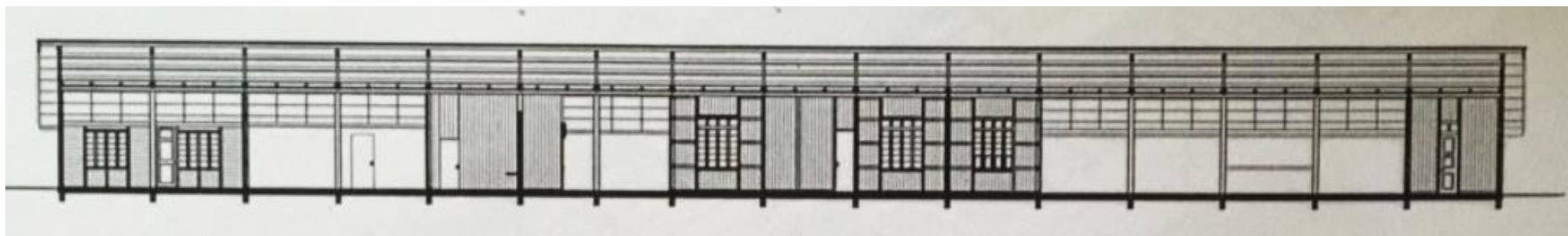
**ELEVATIONS AND SECTION:**



1. Front Elevation shows the façade view with gable roof and series of louvered windows, [86]



2. Rear Elevation shows the façade from the tracks with doors and windows having upper part of window for ventilations, [86]



3. Longitudinal Section shows the station building structure, [86]

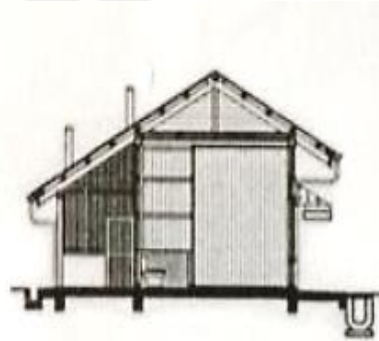


<b>NAME:</b> Tapah Road	<b>YEAR OPEN:</b> 6.9.1893 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Tapah Road Station, Jalan Stesen, 35400 Tapah, Perak.	<b>CAT. NO:</b> 22.1.2
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**SECTION:**



1. Section A-A [86]



2. Section B-B [86]



3. The side view of the old station building which was preserved and the new building was built adjacent to it.



4. The single panel wooden door and four panels wire mesh windows.



5. The view towards the office area.



6. View from the tracks which now have been raised for double electrification.

<b>NAME:</b> Tapah Road	<b>YEAR OPEN:</b> 6.9.1893 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Tapah Road Station, Jalan Stesen, 35400 Tapah, Perak.	<b>CAT. NO:</b> 22.1.3
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1. The old station was preserved but the roof has changed from its original.



2. The ticketing counter.



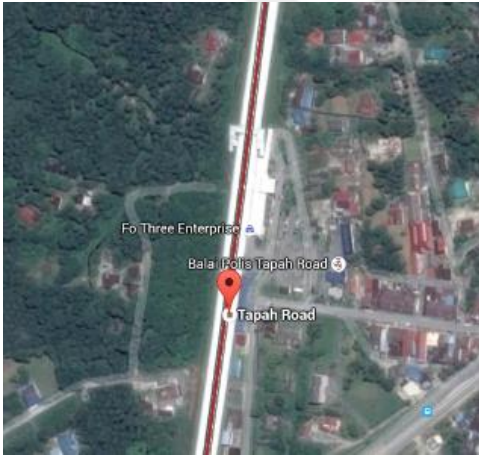
3. Timber door.

#### **BUILDING DESCRIPTION:**

According to the measured drawings and photographs shown above, the station building has rectangular shaped plan covered with gable roof. The station building was made of timber which includes ticketing office, waiting area, offices, canteen and musolla. The doors are mostly double panels doors and single panel door made of timber. The windows

<b>NAME:</b> Tapah Road	<b>YEAR OPEN:</b> March 2007 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Tapah Road Station, Jalan Stesen, 35400 Tapah, Perak.	<b>CAT. NO:</b> 22.2
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**PHOTOGRAPHS:**



Map 22.2 Location Map of Tapah Road Station  
(Google Map retrieved on 8 January 2016)

**BUILDING INFORMATION;**



In March 2007, as part of the electrified double tracking project between Rawang and Ipoh, it was rebuilt, with the old station building being retained.

**CURRENT SITUATION:** In Operation.




Image 38 Image of Tapah Road Station



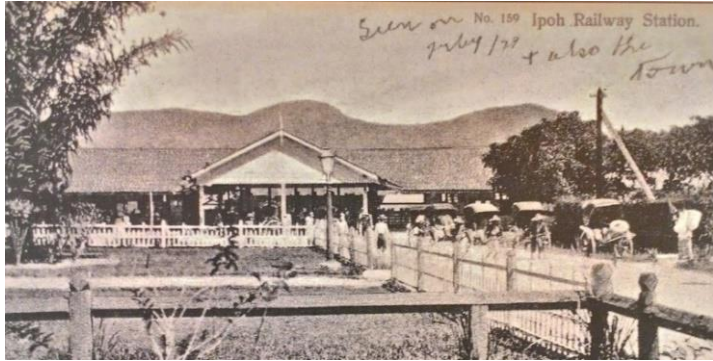


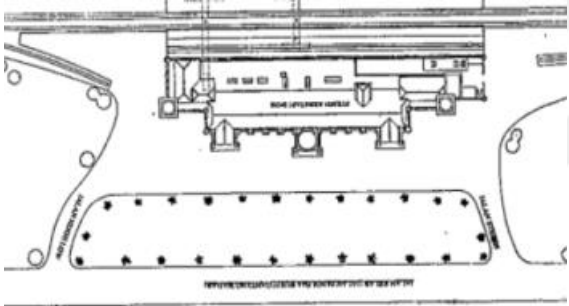


<b>NAME:</b> Batu Gajah	<b>YEAR OPEN:</b> 17.10.1893 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Batu Gajah Station, Perak.	<b>CAT. NO:</b> 23.1
 <p>Map 23.1 The red dot on FMSR Construction Map dated August 1898 show Batu Gajah Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 39 Batu Gajah old station [76]</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Batu Gajah Station was opened on 17<sup>th</sup> October 1893 (red dot in map). This station connected from Batu Gajah Station – Lahat Station – Ipoh Station lines (yellow dot in map).</p>		<p><b>PLAN:</b></p> <p>According to the photo above, it can say that the probability of the station is rectangular in plan.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Demolished</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>According to the photo shown above, the station used hipped roof. It has two double panels windows on the side elevation. Two open spaces can be seen on the building probably the waiting area and canteen. The station building is a timber building.</p>		



<b>NAME:</b> Batu Gajah	<b>YEAR OPEN:</b> March 2007 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Batu Gajah Station, Jalan Pisang Berangan, Batu Gajah, 31000 Perak.	<b>CAT. NO:</b> 23.2
<b>PHOTOGRAPHS:</b>				
 <p>Map 23.2 Location plan of Batu Gajah Station (Google Map retrieved on 8 January 2016.)</p>				
<b>BUILDING INFORMATION;</b>		Image 40 Batu Gajah New Station was built in 2007.		
<p>In March 2007, as part of the electrified double tracking project between Rawang and Ipoh, it was rebuilt.</p>				
<b>CURRENT SITUATION:</b> In Operation.				

<b>NAME:</b> Lahat	<b>YEAR OPEN:</b> 17.10.1893 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Lahat Station, Perak.	<b>CAT. NO:</b> 24
 <p>Map 24 The red dot on FMSR Construction Map dated August 1898 show Lahat Station [63]</p>		<b>PHOTOGRAPHS:</b>  <p>No pictures found.</p>		
<b>BUILDING HISTORY;</b>  Lahat Station was opened on 17 <sup>th</sup> October 1893 (red dot in map). This station connected from Batu Gajah Station – Lahat Station – Ipoh Station lines (yellow dot in map).		<b>PLAN:</b>  <p>No old plans and drawings were found.</p>	<b>MAIN FAÇADE:</b>  <p>No pictures found.</p>	
<b>CURRENT SITUATION:</b> Demolished		<b>BUILDING DESCRIPTION:</b>  <p>No description.</p>		

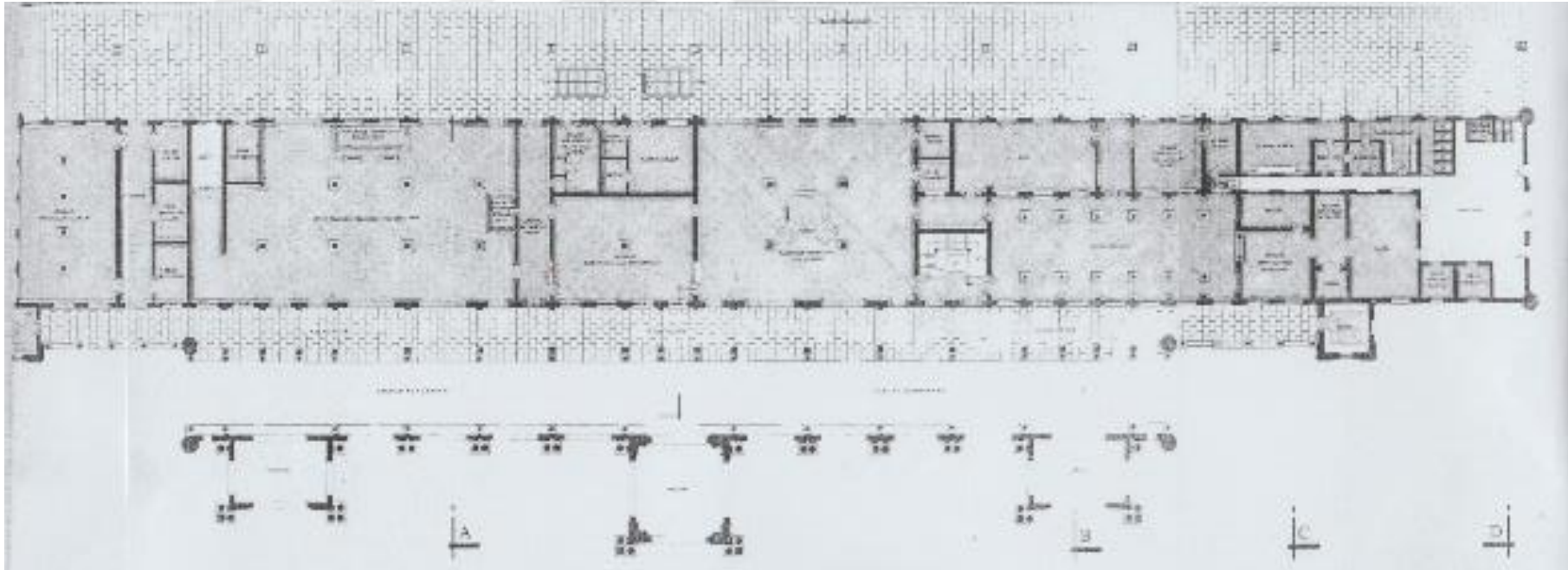
<b>NAME: Ipoh</b>	<b>YEAR OPEN: 17.10.1893</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Ipoh Station, Jalan Stesen, 30100 Ipoh, Perak.</b>	<b>CAT. NO: 25.1</b>
 <p>Map 25.1 The red dot on FMSR Construction Map dated August 1898 show Ipoh Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 41 View towards the tracks [68]</p>  <p>Image 42 Front view from the main road [68]</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Ipoh Station was opened on 17<sup>th</sup> October 1893 (red dot in map). This station connected from Batu Gajah Station – Lahat Station – Ipoh Station lines (yellow dot in map). Opened in 17<sup>th</sup> October 1893 and demolished for the construction of the new station.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Demolished</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>According to the 1908 photo shown above, it can be seen that the station building has rectangular building plan covered with two interlocking gable roofs. It has projecting portico with a finial on top of the roof.</p>		

<b>NAME:</b> Ipoh	<b>YEAR OPEN:</b> 1917 <b>YEAR BUILT:</b> 1914	<b>ARCHITECT:</b> Arthur Benison Hubback	<b>ADDRESS:</b> Ipoh Station, Jalan Stesen, 30100 Ipoh, Perak.	<b>CAT. NO:</b> 25.2
 <p>Map 25.2 Location plan of Ipoh Station [87]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 43 View during the early years of the station (Malaysia National Archives, 2015)</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Ipoh Station started their construction work in 1914 and its construction was said to have been supervised by Arthur Benison Hubback himself. It was completed in 1917. It was built first to cater to the expanding population of Ipoh and most importantly to cope with the growing business of tin mining industry at that time.</p> <p><b>CURRENT SITUATION:</b> Still in Operation</p>		 <p>Image 44 The right side view of the station in 2015</p>		



<b>NAME: Ipoh</b>	<b>YEAR OPEN: 1917</b> <b>YEAR BUILT: 1914</b>	<b>ARCHITECT: Arthur Benison Hubback</b>	<b>ADDRESS: Ipoh Station, Jalan Stesen, 30100 Ipoh, Perak.</b>	<b>CAT. NO: 25.2.1</b>
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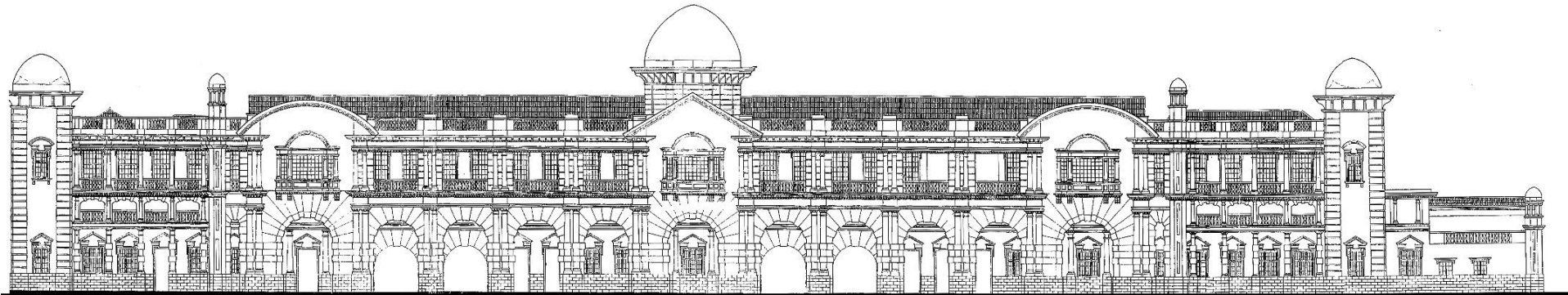
**PLAN:**



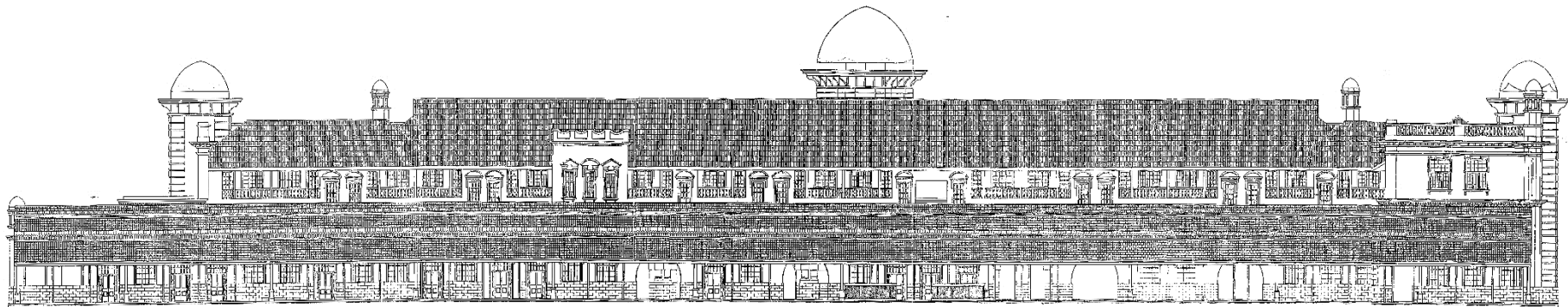
Ground Floor Plan shows the rectangular floor plan with projecting porticoes and its tracks, [87]

<b>NAME: Ipoh</b>	<b>YEAR OPEN: 1917</b> <b>YEAR BUILT: 1914</b>	<b>ARCHITECT: Arthur Benison Hubback</b>	<b>ADDRESS: Ipoh Station, Jalan Stesen, 30100 Ipoh, Perak.</b>	<b>CAT. NO: 25.2.2</b>
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**ELEVATIONS:**



1. Front Elevation shows symmetrical building façade with a main center dome placed in the middle of the building and a series of round Voussoir arches at the ground level, [87]



2. Rear Elevation shows the rear façade covered with gable roofs , [87]

<b>NAME: Ipoh</b>	<b>YEAR OPEN: 1917</b> <b>YEAR BUILT: 1914</b>	<b>ARCHITECT: Arthur Benison Hubback</b>	<b>ADDRESS: Ipoh Station, Jalan Stesen, 30100 Ipoh, Perak.</b>	<b>CAT. NO: 25.2.3</b>
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**ELEVATIONS:**



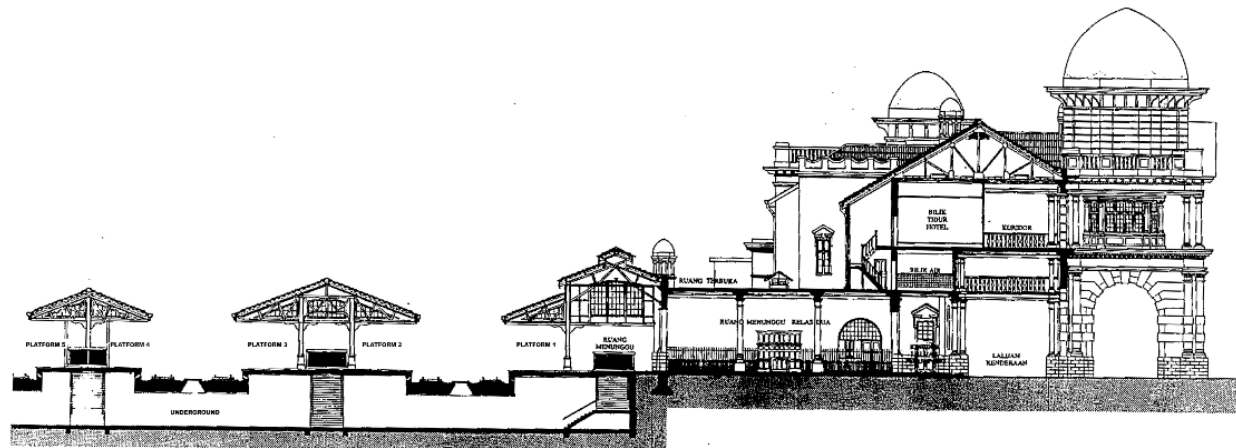
1.Right Elevation shows few parts of the buildings from the first part of projecting porticoes that accommodates the hotel at the first floor, covered entranceway, the main building station, its platforms and tracks, [87]



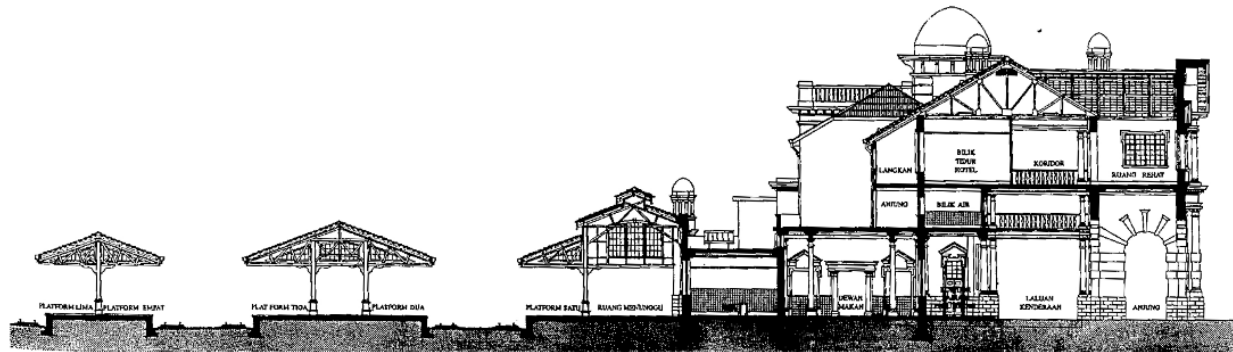
2.Left Elevation shows the projecting part with center dome and the other two domes at the both ends of the main building, [87]

<b>NAME:</b> Ipoh	<b>YEAR OPEN:</b> 1917 <b>YEAR BUILT:</b> 1914	<b>ARCHITECT:</b> Arthur Benison Hubback	<b>ADDRESS:</b> Ipoh Station, Jalan Stesen, 30100 Ipoh, Perak.	<b>CAT. NO:</b> 25.2.4
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**SECTIONS:**



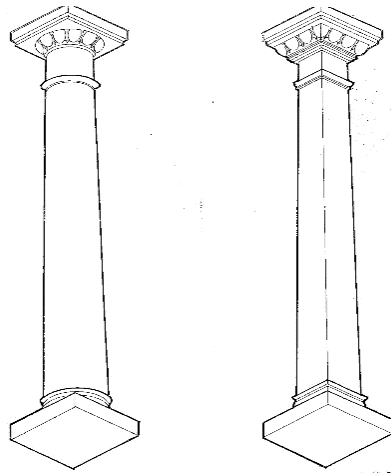
1. Section A-A shows the underground tunnel that connected all of the platforms, [87]



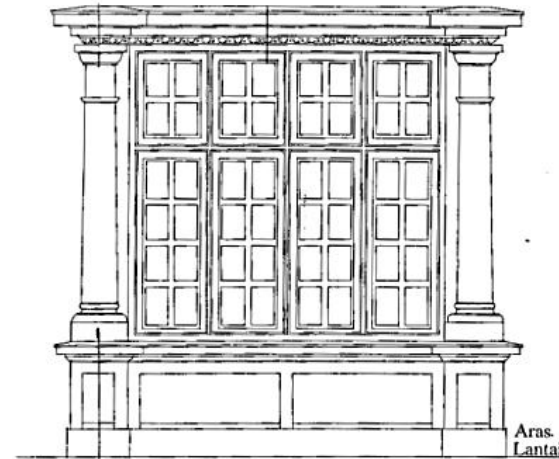
2. Section B-B shows timber building structures of the station building and its roof platforms, [87]



<b>NAME: Ipoh</b>	<b>YEAR OPEN: 1917</b> <b>YEAR BUILT: 1914</b>	<b>ARCHITECT: Arthur Benison Hubback</b>	<b>ADDRESS: Ipoh Station, Jalan Stesen, 30100 Ipoh, Perak.</b>	<b>CAT. NO: 25.2.5</b>
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1. Egg and dart moldings on round and square columns widely used in building [87]



2. Windows detailing [87]

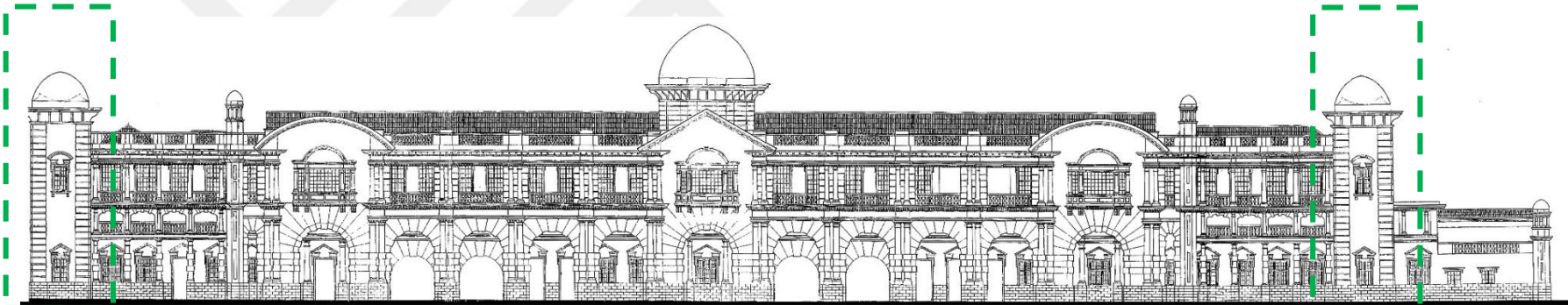


3. Overall view of the building façade showing balustrades on the roofline



4. Balustrades as a parapet wall

<b>NAME:</b> Ipoh	<b>YEAR OPEN:</b> 1917 <b>YEAR BUILT:</b> 1914	<b>ARCHITECT:</b> Arthur Benison Hubback	<b>ADDRESS:</b> Ipoh Station, Jalan Stesen, 30100 Ipoh, Perak.	<b>CAT. NO:</b> 25.2.6
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1. Square-shaped circulation tower at each corner of the building. Every edge of the towers is decorated with quoins, topped with square based and pointed domes [87]



2. The circulation tower,



3. Overhanging square- based with support brackets

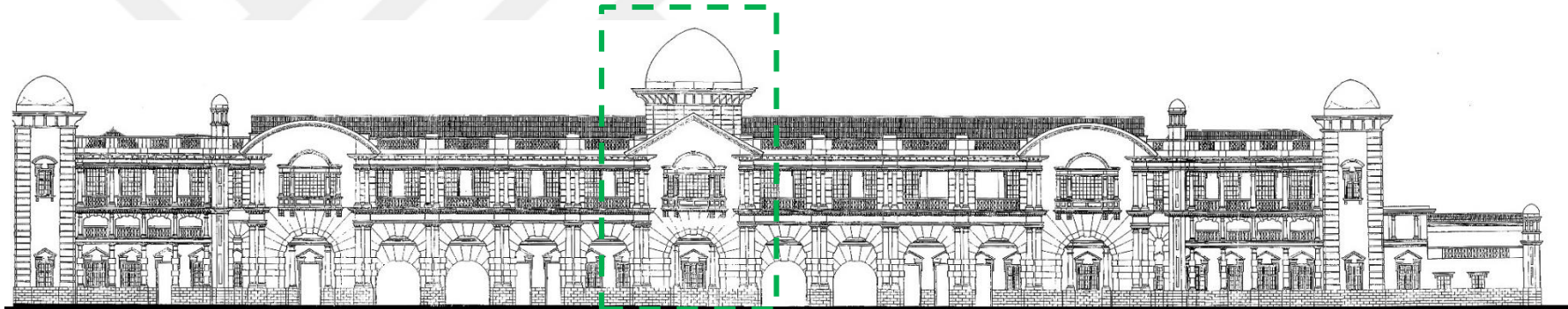


4. Double panels casement windows with segmental arch pediment as its trim



5. Double panels casement windows with triangular pediment as its trim

<b>NAME:</b> Ipoh	<b>YEAR OPEN:</b> 1917 <b>YEAR BUILT:</b> 1914	<b>ARCHITECT:</b> Arthur Benison Hubback	<b>ADDRESS:</b> Ipoh Station, Jalan Stesen, 30100 Ipoh, Perak.	<b>CAT. NO:</b> 25.2.7
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1. The middle part of the projecting portico [87]



2. The main projecting portico located in the middle of the building



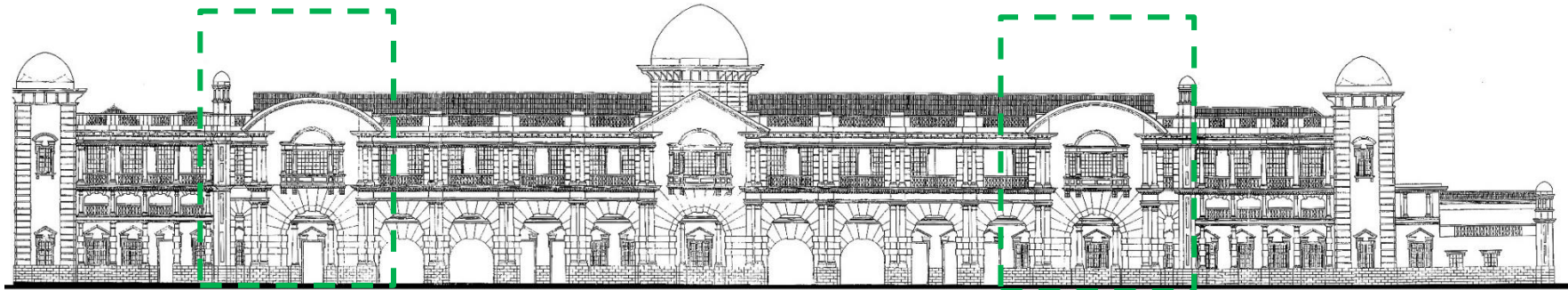
3. Projecting porch with Voussoir arch and tripartite Palladian windows on top of it



4. Tripartite Palladian windows; six panels of casement windows with Palladian style circular pediment trim and window sill together with support brackets



<b>NAME:</b> Ipoh	<b>YEAR OPEN:</b> 1917 <b>YEAR BUILT:</b> 1914	<b>ARCHITECT:</b> Arthur Benison Hubback	<b>ADDRESS:</b> Ipoh Station, Jalan Stesen, 30100 Ipoh, Perak.	<b>CAT. NO:</b> 25.2.8
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1. The segmental arch projecting porticoes [87]



2. The side view of the station shows pinnacles at the entrance porticoes topped with domes with eight columns as it based.



- 3. The double columns of round and square shaped with eggs and darts capital.
- 4. The façade shows the circular pediment supported with double columns of round and square shaped with egg and darts capital. There is a circular Voussoir arch at the ground floor and tripartite Palladian window on the first floor.





<b>NAME: Ipoh</b>	<b>YEAR OPEN: 1917</b> <b>YEAR BUILT: 1914</b>	<b>ARCHITECT: Arthur Benison Hubback</b>	<b>ADDRESS: Ipoh Station, Jalan Stesen, 30100 Ipoh, Perak.</b>	<b>CAT. NO: 25.2.9</b>
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1. Overlooking through the picking up and dropping off entranceway with colonnaded at both sides.



2. Overlooking through the porch.



3. Majestic Station Hotel Ipoh was closed in 2011.

<b>NAME: Ipoh</b>	<b>YEAR OPEN: 1917</b> <b>YEAR BUILT: 1914</b>	<b>ARCHITECT: Arthur Benison Hubback</b>	<b>ADDRESS: Ipoh Station, Jalan Stesen, 30100 Ipoh, Perak.</b>	<b>CAT. NO: 25.2.10</b>
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1. Double panels timber glass doors with two fixed timber glass panels on both sides. The upper part lattices are fixed glasses.



2. Double panels timber louvered doors with two fixed louvered panels on both sides. The upper part lattices are timber louvered.





3. The segmental arches later being infill with windows to create more spaces located at the mezzanine floor.

#### **BUILDING DESCRIPTION:**

It is a two-storeys station building with a gable roof and flat roof. The overall picture of this station building; it has symmetrical façade with three protruding pseudo porticoes. The building ends with circulation towers at the both corners having quoins at every corners topped with pointed domes. The Station Hotel at Ipoh has 18 double and 6 single rooms.


On the ground floor takes place an open gallery with circular arches and palladian type of walls. The subbasement walls are of rough façade of grey stones finishes systematically arranged in single Flemish bonds (MASSA, 2017).


Mezzanine floor can be seen on the building façade with segmental arches and balustrades. On the first floor takes places balustrades intervals with double columns. In the middle protruding portico, triangular pediment as a parapet and venetian windows was used, and pointed dome topped on its base. Segmental pediments acts as a parapets can be seen on the other two porticoes adorns with venetian windows. Pinnacles are placed at both end of the protruding porticoes. The pinnacles topped with eight columns and surmounted with pointed domes. Balustrades acts as parapets are seen along the rooflines.


<b>NAME:</b> Kota Bahru	<b>YEAR OPEN:</b> 27.4.1894 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Kota Bahru Station, Gopeng, Perak.	<b>CAT. NO:</b> 26
 <p>Map 26 The red dot on FMSR Construction Map dated August 1898 show Kota Bahru Station (C.O. 700/StraitsSettlements34, British Nationa[63]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 45: The station view next to the new station in 2010, [79]</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Kota Bahru Station (red dot on map) was opened on 27<sup>th</sup> April 1894 connecting from Batu Gajah Station.</p>	<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>		
<p><b>CURRENT SITUATION:</b> Demolished.</p>	<p><b>BUILDING DESCRIPTION:</b></p> <p>The picture above shows the old station side by side with the new station. The old station is of gable roof and rectangular in plan.</p>			



<b>NAME: Talam</b>	<b>YEAR OPEN: 29.9.1894</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Talam Station, Perak.</b>	<b>CAT. NO: 27</b>
No pictures found.		<b>PHOTOGRAPHS:</b>  No pictures found.		
<b>BUILDING HISTORY;</b>  Talam Station was opened on 29 <sup>th</sup> September 1894.		<b>PLAN:</b>  No old plans and drawings could be found.	<b>MAIN FAÇADE:</b>  No pictures found.	
<b>CURRENT SITUATION:</b> Demolished.		<b>BUILDING DESCRIPTION:</b>  No description.		



<b>NAME:</b> Sungei Tampeian	<b>YEAR OPEN:</b> 6.10.1894 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Sungei Tampeian Station, Selangor.	<b>CAT. NO:</b> 28
 <p>Map 28 The red dot on FMSR Construction Map dated August 1898 show Sungei Tampeian Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Sungei Tampeian Station (red dot on map) was opened on 6<sup>th</sup> October 1894 as part of the construction of Serendah – Kuala Kubu line (yellow dots on map).</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Demolished.</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		


<b>NAME:</b> Ulu Yam	<b>YEAR OPEN:</b> 6.10.1894 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Ulu Yam Station, Selangor.	<b>CAT. NO:</b> 29
 <p>Map 29 The red dot on FMSR Construction Map dated August 1898 show Ulu Yam Station [63]</p>		<b>PHOTOGRAPHS:</b>  <p>No pictures found.</p>		
<b>BUILDING HISTORY;</b>  Ulu Yam Station (red dot on map) was opened on 6 <sup>th</sup> October 1894 as part of the construction of Serendah – Kuala Kubu line (yellow dots on map).		<b>PLAN:</b>  No old plans and drawings could be found.	<b>MAIN FAÇADE:</b>  No pictures found.	
<b>CURRENT SITUATION:</b> Demolished.		<b>BUILDING DESCRIPTION:</b>  No description.		

<b>NAME:</b> Rasa	<b>YEAR OPEN:</b> 6.10.1894 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Rasa Station, Selangor.	<b>CAT. NO:</b> 30
 <p>Map 30 The red dot on FMSR Construction Map dated August 1898 show Rasa Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Rasa Station was opened on 6<sup>th</sup> October 1894 as part of the construction of Serendah – Kuala Kubu line (refer to yellow dots on map).</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Demolished.</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		

<b>NAME:</b> Kuala Kubu	<b>YEAR OPEN:</b> 6.10.1894 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Kuala Kubu Station, Selangor.	<b>CAT. NO:</b> 31.1
 <p>Map 31.1 The red dot on FMSR Construction Map dated August 1898 show Kuala Kubu Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 46 Kuala Kubu Railway Station [68]</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Kuala Kubu Station (red dot on map) was opened on 6<sup>th</sup> October 1894 as part of the construction of Serendah – Kuala Kubu line (yellow dots on map).</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>		<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>
<p><b>CURRENT SITUATION:</b> Demolished.</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		



<b>NAME:</b> Kuala Kubu	<b>YEAR OPEN:</b> 5.1.2008 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Kuala Kubu Station, Selangor.	<b>CAT. NO:</b> 31.2
 <p>Map 31.2 The red dot on FMSR Construction Map dated August 1898 show Kuala Kubu Station (C.O. 700/StraitsSettlements34, British [63]</p>		<p><b>PHOTOGRAPHS:</b></p> 		
<p><b>BUILDING INFORMATION;</b></p> <p>Kuala Kubu Station was rebuilt, electrified and opened on 5 January 2008. It was built about 2.5 kilometers away from its original station. The station was named after the town, Kuala Kubu Bharu.</p> <p><b>CURRENT SITUATION:</b> In Operation</p>		<p>Image 47 Kuala Kubu Railway Station</p>		

<b>NAME:</b> Salak	<b>YEAR OPEN:</b> 1.3.1895 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Salak Station, Selangor	<b>CAT. NO:</b> 32
 <p>Map 32 The red dot on FMSR Construction Map dated August 1898 show Salak Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Salak Station (red dot on map) was opened on 1<sup>st</sup> March 1895. Salak Station connected in between Pudu Station and Sungai Besi Station (yellow dots in map).</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Demolished.</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		



<b>NAME:</b> Kampar	<b>YEAR OPEN:</b> 18.3.1895 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Kampar Station, Jalan Stesen, 31900 Kampar, Perak.	<b>CAT. NO:</b> 34.1
 <p>Map 34.1 The map shows A; the old station site (abandoned) and B; the new station building (in-operation), Google Map (8<sup>th</sup> January 2016)</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 49 Kampar Old Station was left abandoned</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Kampar Station was opened on 18<sup>th</sup> March 1895 (refer to 'A' in the Google Map).</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Closed and abandoned.</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>According the photo shown at the next page, it can be seen that the station has rectangular building plan with a gable roof. It also has portico at the façade and it covered with flat roof. The walls are of red faced bricks and using the louvered glass panels' windows.</p>		



<b>NAME:</b> Kampar	<b>YEAR OPEN:</b> 18.3.1895 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Kampar Station, Jalan Stesen, 31900 Kampar, Perak.	<b>CAT. NO:</b> 34.1.1
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**PHOTOGRAPHS:**



1. Faced bricks used in station building.



2. The portico of one storey station building.



3. Louvered glass panel windows used on both; lower and upper part.



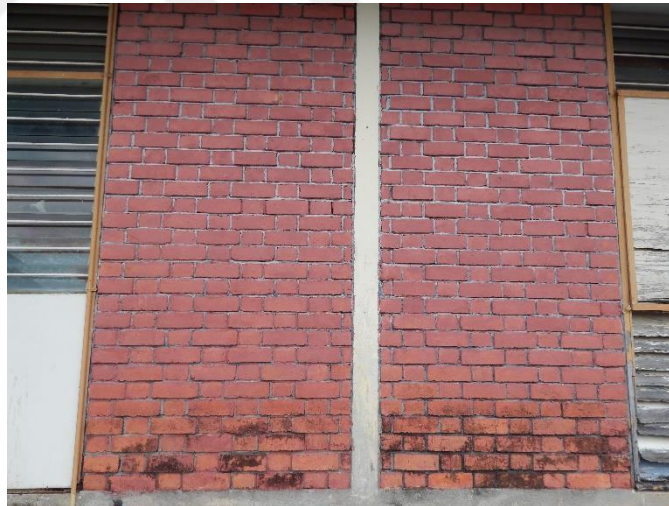
4. Facade view of the station building.

<b>NAME:</b> Kampar	<b>YEAR OPEN:</b> 18.3.1895 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Kampar Station, Jalan Stesen, 31900 Kampar, Perak.	<b>CAT. NO:</b> 34.1.2
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**PHOTOGRAPHS:**



1. Single timber panel door and louvered glass panels windows.






2. Using the Flemish bond of bricks arrangement.





3. Louvered glass panel windows used on both; lower and upper part and timber panels below the windows.






<b>NAME:</b> Kampar	<b>YEAR OPEN:</b> March 2007 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Kampar Station, Jalan Stesen, 31900 Kampar, Perak.	<b>CAT. NO:</b> 34.2
 <p>Map 34.2 The map shows B, the new station building (in-operation), Google Map (8<sup>th</sup> January 2016)</p>		<b>PHOTOGRAPHS:</b>  <p>Figure 50 Entrance view of the building</p>  <p>Figure 51 New station was built next to the old one</p>		
<b>BUILDING INFORMATION;</b>  In March 2007, new building station has been opened as part of the electrified double tracking project between Rawang and Ipoh. It was located next to the old building station (mark with 'B' in Google Map).  <b>CURRENT SITUATION:</b> In Operation				

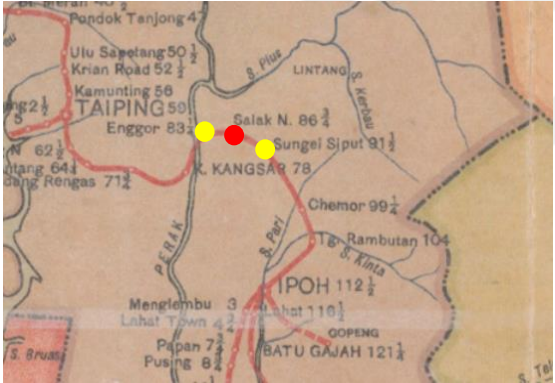


<b>NAME: Tanjong Rambutan</b>	<b>YEAR OPEN: 1.6.1896</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Tanjong Rambutan Station, Perak.</b>	<b>CAT. NO: 35</b>
 <p>Map 35 The red dot on FMSR Construction Map dated August 1898 show Sungei Besi Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 52 View of the station facade from the track [79]</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Tanjong Rambutan Station (red dot in map) was opened on 1<sup>st</sup> June 1896 which connected from Ipoh Station.</p> <p><b>CURRENT SITUATION:</b> Demolished.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
		<p><b>BUILDING DESCRIPTION:</b></p> <p>According the photo shown above, it can be seen that the station has rectangular building plan with a gable roof. The view was taken from the tracks. The station building is made from timber. It has open concept layout planning which in the middle of the building normally accommodate the waiting area.</p>		



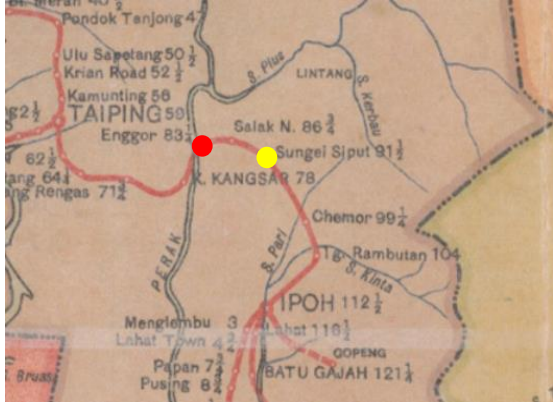
<b>NAME:</b> Chemor	<b>YEAR OPEN:</b> 27.11.1896 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Chemor Station, Perak.	<b>CAT. NO:</b> 36
 <p>Map 36 The red dot on FMSR Construction Map dated August 1898 show Chemor Station [63]</p>		<b>PHOTOGRAPHS:</b>  <p>Image 53 View from the track in 2007 [88]</p>		
<b>BUILDING HISTORY;</b>  Chemor Station (red dot in map) was opened on 27 <sup>th</sup> November 1896 from Tanjong Rambutan Station.		<b>PLAN:</b>  No old plans and drawings could be found.	<b>MAIN FAÇADE:</b>  No pictures found.	
<b>CURRENT SITUATION:</b> Demolished.		<b>BUILDING DESCRIPTION:</b>  According the photo shown above, it can be seen that the station has rectangular building plan with a gable roof. The view was taken from the tracks. The station building is made from timber. It has open concept layout planning which in the middle of the building normally accommodate the waiting area.		

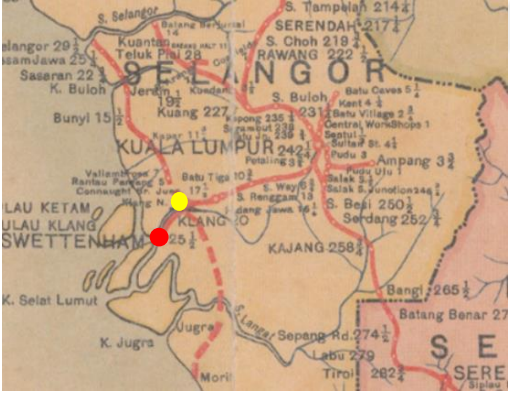


<b>NAME:</b> Sungei Siput	<b>YEAR OPEN:</b> 5.7.1897 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Sungei Siput Station, Perak.	<b>CAT. NO:</b> 37
 <p>Map 37 The red dot on FMSR Construction Map dated August 1898 show Sungei Siput Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 54 View from the track in 2007 [88]</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Sungei Siput Station (red dot in map) was opened on 5<sup>th</sup> July 1897, connected from Chemor Station.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Demolished.</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>According the photo shown above, it can be seen that the station has rectangular building plan with gabled roof. Rod type finial can be seen on top of the roof edge. The station is made of timber. The windows and doors are made of timber and has upper part of ventilation on top of it.</p>		

<b>NAME:</b> Kajang	<b>YEAR OPEN:</b> 14.8.1897 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Kajang Station, Selangor.	<b>CAT. NO:</b> 38
 <p>Map 38 The red dot on FMSR Construction Map dated August 1898 show Kajang Station [63]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 55 Kajang Railway Station on postcard [76]</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Kajang Station (red dot on map) was opened on 14<sup>th</sup> August 1897 connected from Sungai Besi Station (yellow dot on map).</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Demolished.</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>According the photo shown above, it can be seen that the station roof is a combinations of gable roofs interlocking at different angles. The station building was made of timber.</p>		

<b>NAME: Salak North</b>	<b>YEAR OPEN: 1.7.1898</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Salak North Station, Perak.</b>	<b>CAT. NO: 39</b>
 <p>Map 39 The red dot on FMSR Construction Map dated 1919 show Salak North Station (Malaysia National Archives).</p>		<b>PHOTOGRAPHS:</b> <div style="display: flex; justify-content: space-around;"> <div>  <p>Image 56 Abandoned station before being demolished [79]</p> </div> <div>  <p>Image 57 View from the track [76]</p> </div> </div>		
<b>BUILDING HISTORY;</b>  Salak North Station (refer black dot on map) was opened on 1 <sup>st</sup> July 1898, connected from Sungei Siput Station – Salak North Station – Enggor Station (refer yellow dots on map).  <b>CURRENT SITUATION:</b> Demolished.		<b>PLAN:</b>  No old plans and drawings could be found.	<b>MAIN FAÇADE:</b>  No pictures found.	
		<b>BUILDING DESCRIPTION:</b>  According the photo shown above, it can be seen that the station has rectangular building plan with gable roof. It is made of timber. The station has open planning concept for the waiting area which located in the middle of the building.		

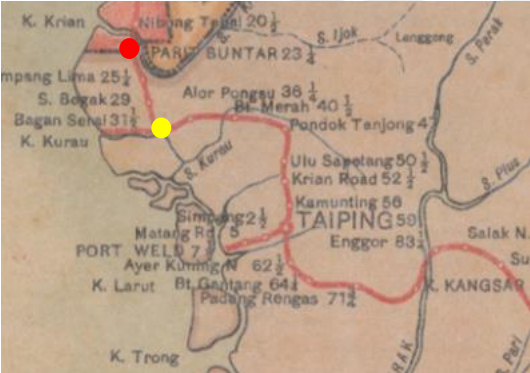




<b>NAME:</b> Enggor	<b>YEAR OPEN:</b> 1.7.1898 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Enggor Station, Perak.	<b>CAT. NO:</b> 40
 <p>Map 40 The red dot on FMSR Construction Map dated 1919 show Enggor Station (Malaysia National Archives).</p>		<b>PHOTOGRAPHS:</b>  <p>No pictures found.</p>		
<b>BUILDING HISTORY;</b>  Enggor Station (red dot on map) was opened on 1 <sup>st</sup> July 1898, connected from Sungei Siput Station – Salak North Station – Enggor Station (yellow dots on map).  <b>CURRENT SITUATION:</b> Demolished.		<b>PLAN:</b>  <p>No old plans and drawings could be found.</p>	<b>MAIN FAÇADE:</b>  <p>No pictures found.</p>	
		<b>BUILDING DESCRIPTION:</b>  <p>No description.</p>		

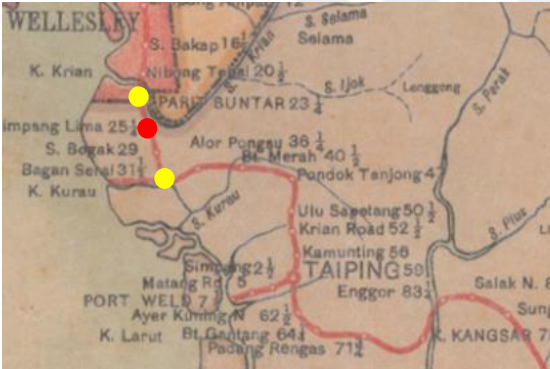
<b>NAME: Port Swettenham</b>	<b>YEAR OPEN: 1.1.1899</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Port Swettenham Station, Selangor.</b>	<b>CAT. NO: 41</b>
 <p>Map 41 The red dot on FMSR Construction Map dated 1919 show Port Swettenham Station (Malaysia National Archives).</p>		<b>PHOTOGRAPHS:</b>  <p>Image 58 Port Swettenham Station (Malaysia National Archives, 2015)</p>  <p>Image 59 Port Swettenham Station from the footbridge [71]</p>		
<b>BUILDING HISTORY;</b> Port Swettenham Station (red dot on map) was opened on 1 <sup>st</sup> January 1899, connected from Klang Station (yellow dot on map). <b>CURRENT SITUATION:</b> Demolished.		<b>PLAN:</b> No old plans and drawings could be found.	<b>MAIN FAÇADE:</b> No pictures found.	
		<b>BUILDING DESCRIPTION:</b> According to the photo shown above, it can be seen that the station has a rectangular building plan with a hipped roof. It was a timber station building.		

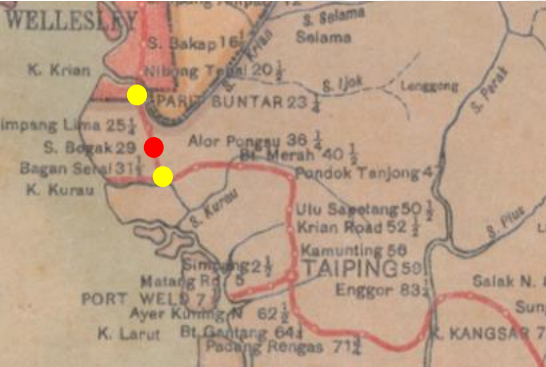
<b>NAME: Pondok Tanjong</b>	<b>YEAR OPEN: 1.9.1899</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Pondok Tanjong Station, Perak.</b>	<b>CAT. NO: 42</b>
 <p>Map 42 The red dot on FMSR Construction Map dated 1919 show Pondok Tanjong Station (Malaysia National Archives).</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 60 Pondok Tanjong Station [79]</p>		
<p><b>BUILDING HISTORY;</b> Pondok Tanjong Station was opened on 1<sup>st</sup> September 1899 (red dot on map). It connected from Ulu Sepetang Station (yellow dot on map).</p> <p><b>CURRENT SITUATION:</b> Demolished.</p>		<p><b>PLAN:</b> No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b> No pictures found.</p>	
		<p><b>BUILDING DESCRIPTION:</b></p> <p>According the photo shown above, it can be seen that the station has rectangular building plan with gable roof. It was a timber station building. There are two panels timber windows with upper part of ventilation.</p>		

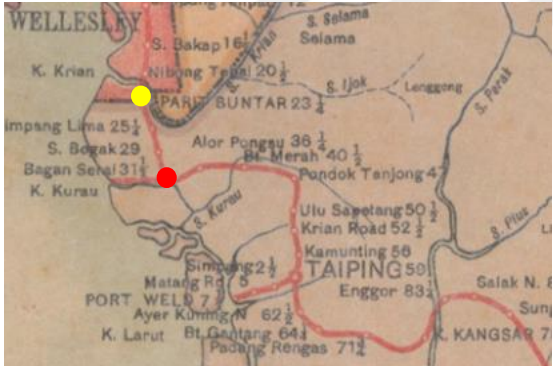





<b>NAME: Parit Buntar</b>	<b>YEAR OPEN: 1.11.1899</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Krian River / Perak Boundary / Parit Buntar Station, Perak.</b>	<b>CAT. NO: 43</b>
 <p>Map 43 The red dot on FMSR Construction Map dated 1919 show Parit Buntar Station (Malaysia National Archives).</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 61 Parit Buntar Station has won a prize in ‘Best Kept Station’, [76]</p>  <p>Image 62 View from the track in 2007 [88]</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Parit Buntar Station (red dot on map) was opened on 1<sup>st</sup> November 1899 for the construction of railway line to Bagan Serai Station (yellow dot on map).</p> <p><b>CURRENT SITUATION:</b> Demolished.</p>		<p><b>PLAN:</b> No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b> No pictures found.</p>	
<p><b>BUILDING DESCRIPTION:</b></p> <p>According the photo shown above, it can be seen that the station has rectangular building plan with gable roof. The overhanging roof eaves were decorated with decorative fascia boards. The station building is made of timber. As can be seen above, there are four panels of vertically long casement window with upper ventilations on top of it.</p>				



<b>NAME:</b> <b>Simpang Lima</b>	<b>YEAR OPEN: 1.11.1899</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Simpang Lima Station, Perak</b>	<b>CAT. NO: 44</b>
 <p>Map 44 The red dot on FMSR Construction Map dated 1919 show Simpang Lima Station (Malaysia National Archives)</p>		<b>PHOTOGRAPHS:</b>  <p style="text-align: center;">No pictures found.</p>		
<b>BUILDING HISTORY;</b>  Simpang Lima Station (red dot on map) was opened on 1 <sup>st</sup> November 1899 for the construction of railway line from Krian River/Perak Boundary/Parit Buntar to Bagan Serai Station (yellow dots on map).	<b>PLAN:</b>  <p style="text-align: center;">No old plans and drawings could be found.</p>	<b>MAIN FAÇADE:</b>  <p style="text-align: center;">No pictures found.</p>		
<b>CURRENT SITUATION:</b> Demolished.	<b>BUILDING DESCRIPTION:</b>  <p style="text-align: center;">No description.</p>			

<b>NAME:</b> Sungai Bogak	<b>YEAR OPEN:</b> 1.11.1899 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Sungai Bogak Station, Perak.	<b>CAT. NO:</b> 45
 <p>Map 45 The red dot on FMSR Construction Map dated 1919 show Sungai Bogak Station (Malaysia National Archives)</p>		<b>PHOTOGRAPHS:</b>  <p>No pictures found.</p>		
<b>BUILDING HISTORY;</b>  <p>Sungai Bogak Station (red dot on map) was opened on 1<sup>st</sup> November 1899 for the construction of railway line from Krian River/Perak Boundary/Parit Buntar to Bagan Serai Station (yellow dots on map).</p>		<b>PLAN:</b>  <p>No old plans and drawings could be found.</p>	<b>MAIN FAÇADE:</b>  <p>No pictures found.</p>	
<b>CURRENT SITUATION:</b> Demolished.		<b>BUILDING DESCRIPTION:</b>  <p>No description.</p>		

<b>NAME:</b> Bagan Serai	<b>YEAR OPEN:</b> 1.11.1899 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Bagan Serai Station, Jalan Stesen, 34200 Bagan Serai, Perak.	<b>CAT. NO:</b> 46.1
 <p>Map 46.1 The red dot on FMSR Construction Map dated 1919 show Bagan Serai Station (Malaysia National Archives)</p>		<b>PHOTOGRAPHS:</b>  <p>Image 63 side view of station building</p>  <p>Image 64 View from the track [88]</p>		
<b>BUILDING HISTORY;</b> Bagan Serai Station (red dot on map) was opened on 1 <sup>st</sup> November 1899. It was connected from Krian River Station. The station was named after the town, Bagan Serai. <b>CURRENT SITUATION:</b> Demolished.		<b>PLAN:</b> No old plans and drawings could be found. <b>MAIN FAÇADE:</b> No pictures found. <b>BUILDING DESCRIPTION:</b> According the photo shown above, it can be seen that the station has rectangular building plan with gable roof. The station building is made of timber.		

<b>NAME:</b> Bagan Serai	<b>YEAR OPEN:</b> 2013 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Bagan Serai Station, Jalan Stesen, 34200 Bagan Serai, Perak.	<b>CAT. NO:</b> 46.2
 <p>Map 46.2 Location of Bagan Serai new station, (Google Map retrieved on 8 January 2016.)</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 65 Side view of station building</p>		
<p><b>BUILDING INFORMATION:</b></p> <p>Bagan Serai Station was rebuilt in 2013 in accordance with Double Electrified Tracking Project.</p> <p><b>CURRENT SITUATION:</b> In Operation.</p>				





### **3.2 DEVELOPMENT PHASE 2 (1901 – 1948)**

The second development stage of the railway lines in Malaya began with the formation of the Federated Malay States in 1896 which led to the formation of the Federated Malay States Railway (FMSR) in 1901. The Federated Malay States constituted of Perak and Selangor, and then joined with Negeri Sembilan in 1909, Johore and Singapore in 1913 for the urgency of sharing benefits and to have good transport linkages throughout the states. The Colonial Office (Penang and Malacca) were aware that linkages through the states will bring more economic and political advantages to them. As a result, in 1903, the railway lines were linked from Prai to Selangor. According to the Federated Malay States Railways 1912 Annual Report, the past year was very important in the history of railway development in the Peninsula, as the Johore State Railway and the Singapore Government Railway was included in the Federated Malay States Railways Administration.

#### **Singapore Government Railway Stations, (1903 – 1912)**

In 1861, the first proposal to run the line between Singapore and New Harbour was made by Colonel Collyer, whereby to serve the passengers and mail services [1]. It was failed. By reviving the original proposal in 1869, again the plan was put down as it was refused by the British Colony. In 1898, the Governor of Singapore, Sir Cecil Clementi announced that the government will build a railway across the island from Tank Road, Pasir Panjang to Woodlands in Kranji (Figure 3.5), which the funding of which was \$1,000,000. It was approved a year later. The railway construction started in 1900 with Messrs Gregory Eyles, a consulting engineers company and also with the General Manager of Federated Malay States Railways, C.E. Spooner was appointed as the advisor. The construction finished in 1903.

List of Singapore Government railway station buildings;

1. Woodlands
2. Mandai
3. Bukit Panjang
4. Bukit Timah
5. Holland Road
6. Cluny
7. Newton
8. Singapore, Tank Road

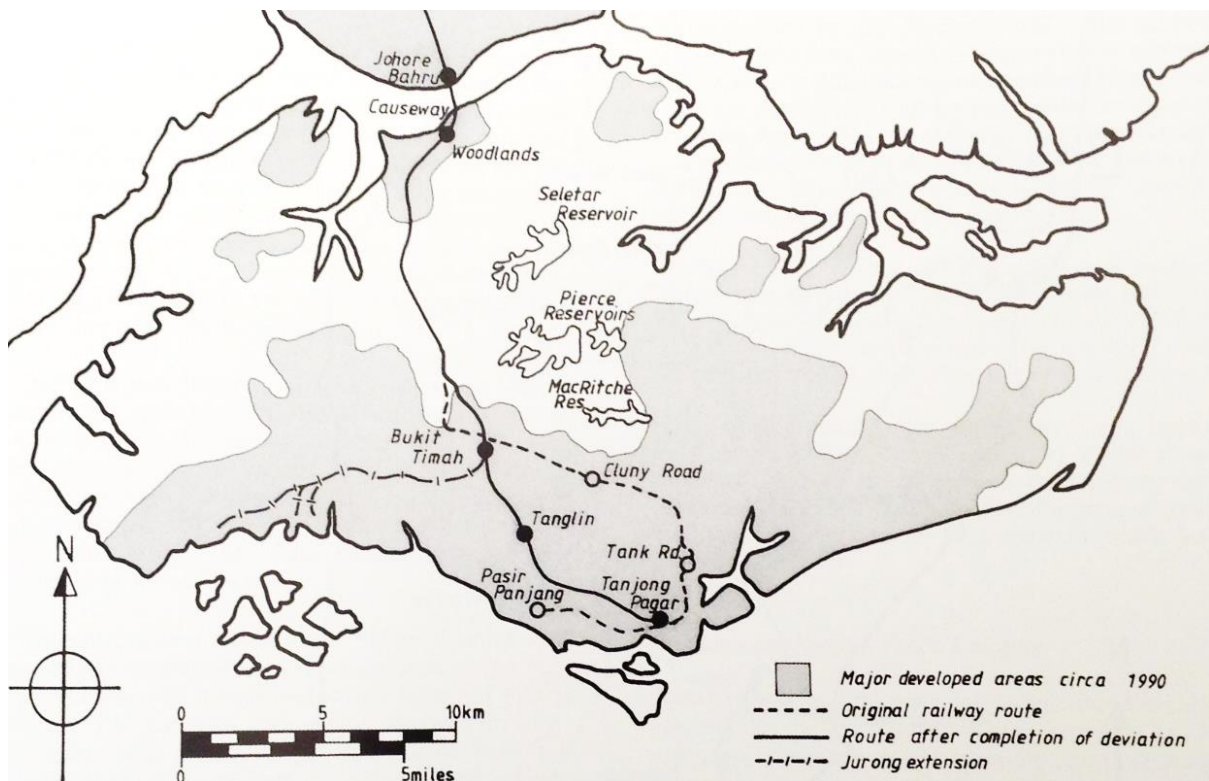


Figure 3.5 The railway development in Singapore showing the original railway route and the route after the completion of deviation [1]

### **Johore State Railway Stations Catalogue, (1903 – 1912)**

In 1899, Frank Swettenham formally made proposal on the extension of the railway from Johore to Singapore whereby the railway should be constructed and operated by the Federated Malay States Railways (FMSR). But since Johore was not a part of the Federated Malay States

(FMS), he proposed that the construction should be financed by the Johore State, using a loan from Federated Malay States. The British Colonial Office was in agreement with the proposals, which were put to the Sultan of Johore [1]. Though afraid of the greater British influences in his State, Sultan of Johore decided to take out a private loan and entrust the construction of the railway to Messrs. Barry and Pauling, the engineering company. In order to prevent the Sultan of Johore from constructing any lines, the British threatened the Johore State through the British Resident, Frank Swettenham. Finally, in July 1904, the Federated Malay States financed 3% loan to Johore, while the construction being held by FMSR, but the line to be operated by Johore State Railway. The construction finished in 1909.

List of Johore State railway station buildings;

1. Batu Anam
2. Buloh Kasap
3. Segamat

### **Federated Malay States Railways Stations Catalogue, (1901 – 1948)**

“The Resident General of the Federated Malay States also put forward a memorandum to the Colonial Office for railway extensions in the country which encompassed several important objectives. First of all, the Resident General wished to join the Perak and Selangor systems by a railway line that would run through valuable but undeveloped country side, across which state governments were constructing a cart-road. Secondly, an extension line from Kuala Kubu line to Kuala Lipis (the administrative capital of Pahang), as this would serve the mines at Raub, Penjom, and the neighbouring areas. Thirdly, a line from southern terminus of the railway near Cheras to join Sungei Ujong line at Seremban would give a railway connection from Prai to Port Dickson in the vicinity of Malacca”, [91]. Agriculture was introduced, new



areas as tin alone could not carry the entire economy. The existence of railway transportation services also established road transportation developments. Road constructions, buses and caravans were used for shuttle services from one station to another station. During the year 1905, there were 87 permanent stations opened for traffic. In 1908, lorry services were bought by the FMSR for transporting goods. The railway lines kept expanding and in 1909, the railway lines ran further more to the southern part of Malaya, Johor Bahru. According to the Federated Malay States Railways 1939 Annual Report, there were 213 permanent stations and 93 flag stations opened for traffic use. After the year 1939, there were no records taken whereby in 1941 until 1945, there was an intervention and occupation in Malaya by the Japanese. Upon the event, the reconciliation period started in 1943 and ended in 1948. Therefore, there were also no records regarding the number of station buildings made.

List of Second Phase for Railway Station buildings;

- |                          |                             |
|--------------------------|-----------------------------|
| 59. Woodlands            | 90. Keru                    |
| 60. Mandai               | 91. Tebong                  |
| 61. Bukit Panjang        | 92. Batang Melaka           |
| 62. Bukit Timah          | 93. Ayer Kuning             |
| 63. Holland Road         | 94. Gemas                   |
| 64. Cluny                | 95. Genuang                 |
| 65. Newton               | 96. Tenang                  |
| 66. Singapore, Tank Road | 97. Labis                   |
| 67. Batu Anam            | 98. Bekok                   |
| 68. Buloh Kasap          | 99. Paloh                   |
| 69. Segamat              | 100. Nyior                  |
| 70. Bt. Merah            | 101. Kluang                 |
| 71. Ayer Kuning North    | 102. Mengkibol              |
| 72. Bukit Gantang        | 103. Rengam                 |
| 73. Bidor                | 104. Layang- Layang         |
| 74. Batang Benar         | 105. Sedenak                |
| 75. Sepang               | 106. Kulai                  |
| 76. Labu                 | 107. Senai                  |
| 77. Tiroi                | 108. Tampoi                 |
| 78. Sungkai              | 109. Johore Bahru           |
| 79. Slim River           | 110. Salak South Junction   |
| 80. Behrang              | 111. Ampang Junction        |
| 81. Trolak               | 112. Bt. Tengah             |
| 82. Batu Road            | 113. Penanti                |
| 83. Sungai Gadut         | 114. Jarak                  |
| 84. Perhentian Tinggi    | 115. Kreh (Tassek Gelugor). |
| 85. Pedas                | 116. Pinang Tunggal         |
| 86. Rembau               | 117. Sungei Patani          |
| 87. Chengkau             | 118. Sungei Lallang         |
| 88. Kendong              | 119. Bedong                 |
| 89. Tampin               | 120. Sungei Toh Pawang      |

- |      |               |      |                          |
|------|---------------|------|--------------------------|
| 121. | Gurun         | 130. | Arau                     |
| 122. | Gua Chempedak | 131. | Bukit Ketri              |
| 123. | Junun         | 132. | Kubang Tiga              |
| 124. | Kobah         | 133. | Padang Besar             |
| 125. | Tokai         | 134. | Chamek                   |
| 126. | Alor Setar    | 135. | Tanjong Pagar, Singapore |
| 127. | Anak Bukit    |      |                          |
| 128. | Tunjang       |      |                          |
| 129. | Kodiang       |      |                          |



### **Intervention and Occupation by the Japanese (1941 – 1948)**

When the Japanese invaded Malaya on 8 December 1941 until 15 August 1945, there was an interruption on railway system where some of the stations were bombed and railway lines redirected to another destination. The condition of railway after the Japanese occupation, when the British forces entered Malaya in September 1945, it was found that the permanent way between Singapore and the Siamese frontier and on the Port Swettenham and Port Dickson branch line was intact but its condition necessitated reduced maximum speeds. Rails had been removed from 200 miles of the Tronoh, Teluk Anson and Malacca branches – in all 276 miles of running lines and 57 miles of second line and sidings no longer existed. A large proportion of the rails and fittings had been taken out of Malaya and used in the construction of the Burma/Siam and Kra Isthmus line (Figure 3.6). A total of 10,000 linear feet of bridging had been destroyed or removed.

Railway telecommunications had suffered severely from neglect and bad workmanship and much equipment had been removed. Out of total approximately 7000 staff quarters which were in existence prior to the war, 260 were totally destroyed and 300,000 square feet of godown accommodation had been lost as a result of bombing. The main workshop at Sentul had been very badly damaged by the allied bombing which 63% had been completely destroyed. Machinery, plant and stores had been widely dispersed. Allied bombers had also destroyed a large part of the locomotive running shed at Kuala Lumpur and wrecked most of the carriage shed which had stabling capacity for 100 coaches (Malayan Union Railway Report Year 1946 - from 1st April until 31st December).

There was no development or new station being built during the invasion. The main objectives after the post-war were to restore as many buildings as to fit the usage in the shortest time possible.



In the year 1947, competition from other forms of transport is becoming more severe. The delivery lorry had been handicapped and every effort being made to increase the number of passenger coaches in service by repairing war damaged stock. Large deliveries of new wagons from United Kingdom are expected during 1948. Since the war, passenger fares have been doubled and good freight rates increased by from 50% to 66 2/3 percent. Accommodation available in Station Hotels in Kuala Lumpur and Ipoh and in the Rest Rooms provided in Johore Bahru and Singapore stations was fully occupied throughout the year. The replacement of furniture to restore the pre-war standards has progressed satisfactorily, but the supply of carpets, sanitary fittings and bath ordered from United Kingdom in replacements of equipment removed by the Japanese is still awaited, (Malayan Union Railway Report 1947).

On the year 1948, 27 station buildings were renovated. The Singapore Station and Hotel building, completed in 1932 had been made unsightliest by the Japanese who for camouflage purpose had treated the whole of the exterior with heavy black oil. This was removed by repeated application of caustic soda at a cost of \$8,800.

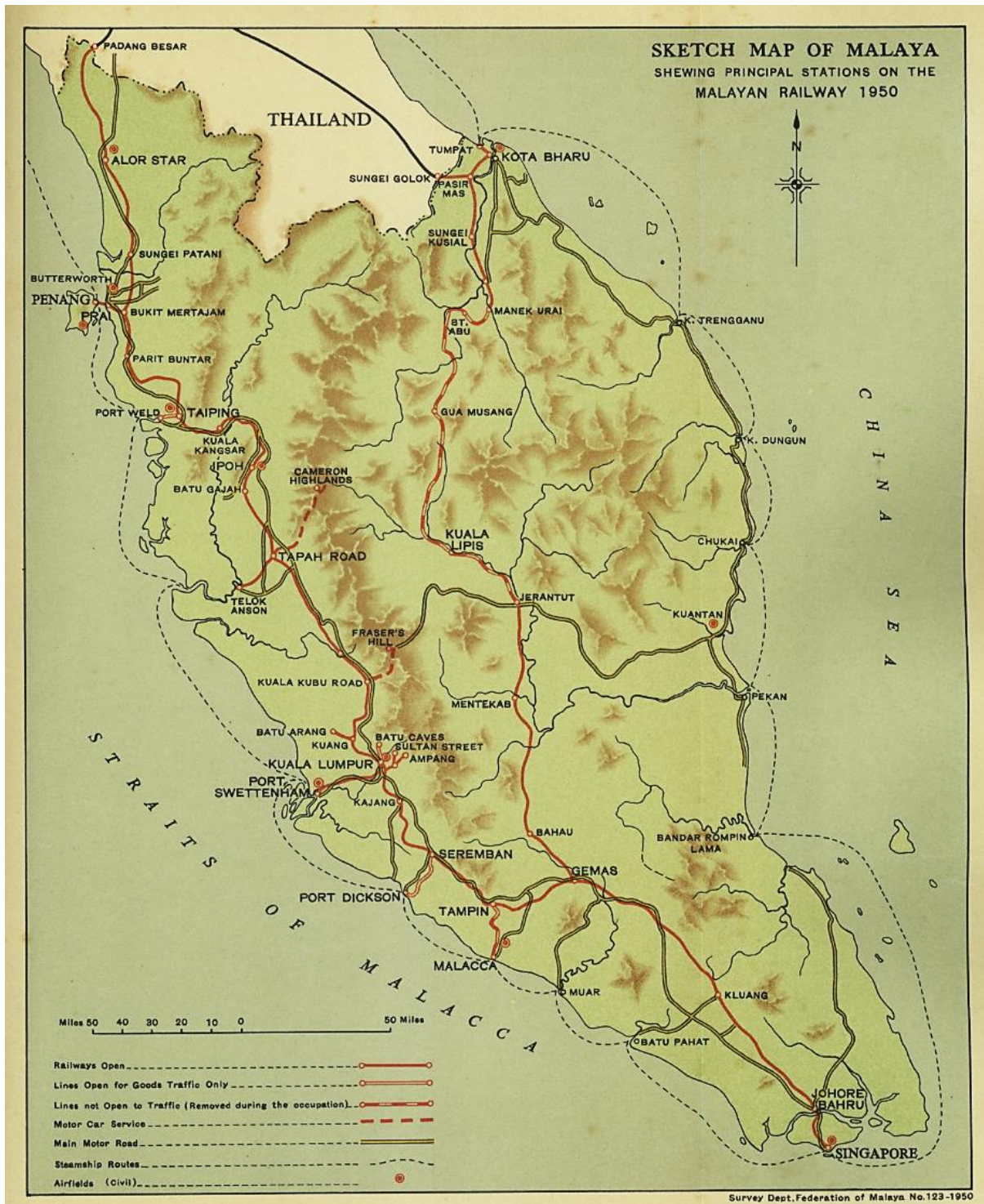


Figure 3.6 Principal Station on the Malayan Railway Map 1950 [92]



<b>NAME:</b> Woodlands	<b>YEAR OPEN:</b> January 1903 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Woodlands Station, Singapore.	<b>CAT. NO:</b> 59.1
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**PHOTOGRAPHS:**



Map 59.1 The yellow dot on map show Woodlands Station, Urban Redevelopment Authority, Singapore [93]



Image 82 Woodlands Station circa 1900 [94]



Image 83 Woodlands Station with jetty circa 1900 [95]

**BUILDING HISTORY;**

Woodlands Station was opened on January 1903 to connect to Tank Road Station with a distance of 16.79miles. There were 6 intermediate station in between, (1)Mandai, (2)Bukit Panjang, (3)Bukit Timah, (4)Holland Road, (5)Cluny and (6)Newton.

**CURRENT SITUATION :** Demolished

**PLAN:**

No old plans and drawings could be found.

**MAIN FAÇADE:**

No pictures found.

**BUILDING DESCRIPTION:**

According to the 1900 photo shown above, it can be seen that the station building might have ‘I’ shaped plan covered with interlocking gable roofs. It is a single storey timber building.



<b>NAME:</b> Woodlands	<b>YEAR OPEN:</b> August 1998 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Woodlands Station, 11 Woodlands Crossing, Woodlands 738103, Singapore..	<b>CAT. NO:</b> 59.2
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**PHOTOGRAPHS:**



Map 59.2 The Google map shows Woodlands Station (Google Map retrieved on 8 January 2015)

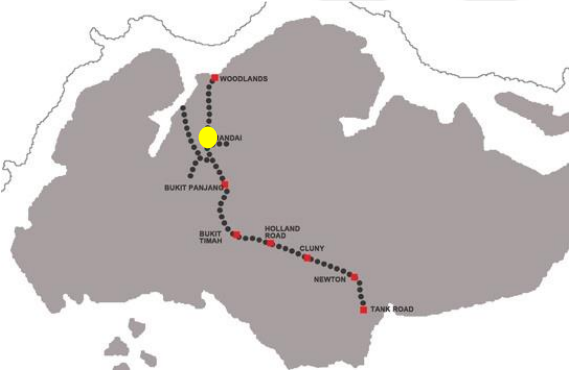


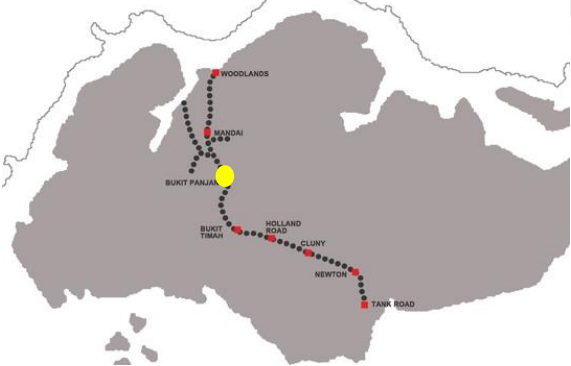
Image 84 Woodlands Station Checkpoint.



**BUILDING INFORMATION;**

Woodlands Station was opened on August 1998 as the Singapore border facility for rail passengers. Woodlands train station checkpoint is a border checkpoint between Malaysia-Singapore.

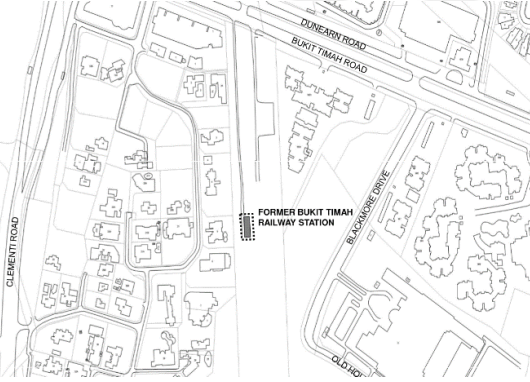



**CURRENT SITUATION :** In Operation


<b>NAME: Mandai</b>	<b>YEAR OPEN: January 1903</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Mandai Station, Singapore.</b>	<b>CAT. NO: 60</b>
 <p>Map 60 The yellow dot on map show Mandai Station, Urban Redevelopment Authority, Singapore [93]</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Mandai Station was opened on January 1903 to connect from Woodlands Station to Tank Road Station with a distance of 16.79miles. Mandai Station was the first station after Woodlands Station.</p> <p><b>CURRENT SITUATION :</b> Demolished</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		


<b>NAME: Bukit Panjang</b>	<b>YEAR OPEN: January 1903</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Bukit Panjang Station, Singapore</b>	<b>CAT. NO: 61</b>
 <p>Map 61 The yellow dot on map show Bukit Panjang Station, Urban Redevelopment Authority, Singapore [93]</p>		<b>PHOTOGRAPHS:</b>  <p>No pictures found.</p>		
<b>BUILDING HISTORY;</b>  Bukit Panjang Station was opened on January 1903 to connect from Woodlands Station to Tank Road Station with a distance of 16.79miles. Bukit Panjang Station was the second station after Woodlands Station.		<b>PLAN:</b>  No old plans and drawings could be found.	<b>MAIN FAÇADE:</b>  No pictures found.	
<b>CURRENT SITUATION :</b> Demolished		<b>BUILDING DESCRIPTION:</b>  No description.		

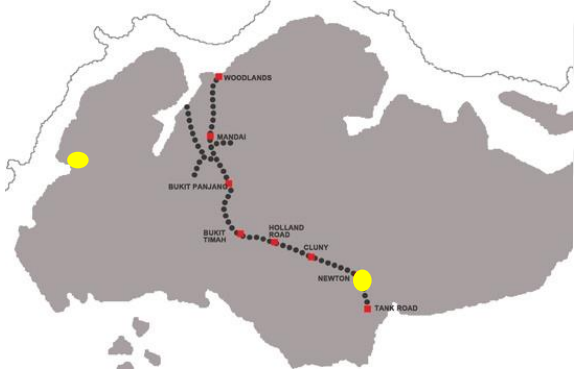

<b>NAME:</b> Bukit Timah	<b>YEAR OPEN:</b> January 1903 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Bukit Timah Station, Singapore	<b>CAT. NO:</b> 62.1
 <p>Map 62.1 Location map show Bukit Timah Station [96]</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 85 View of the station circa 1905 [97]</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Bukit Timah Station was opened on January 1903 to connect from Woodlands Station to Tank Road Station with a distance of 16.79miles. Located near King's Albert Park was one of the smaller stations built to serve the suburban parts of Singapore.</p> <p><b>CURRENT SITUATION:</b> Demolished</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
		<p><b>BUILDING DESCRIPTION:</b></p> <p>According to the 1900 photo shown above, it can be seen that the station building might have 'I' shaped plan covered with interlocking gable roofs. It is a single storey timber building. It has decorative fascia board at the roof.</p>		



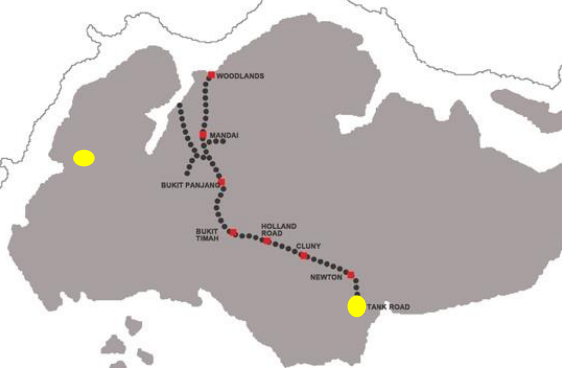

<b>NAME:</b> Bukit Timah	<b>YEAR OPEN:</b> 1932 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Bukit Timah Station, 1 Blackmore Drive, Bukit Timah, Singapore	<b>CAT. NO:</b> 62.2
<b>PHOTOGRAPHS:</b>				
 <p>Map 62.2 Location map show Bukit Timah Station, Urban Redevelopment Authority, Singapore [93]</p>		 <p>Image 86 View of the station from the opposite track [93]</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Bukit Timah Station was rebuilt and opened in 1932 for Singapore – Johor Bharu KTM Intercity mainline.</p>		 <p>Image 87 View of the station when it is still in operation [93]</p>  <p>Image 88 Facing bricks were used for the walls [93]</p>		
<p><b>CURRENT SITUATION:</b> Closed and gazette as conserved building by Singapore Government on 27<sup>th</sup> May 2011.</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>According to the photo shown above, it can be seen that the station building has a rectangular building plan covered with gable roof. It is a single storey brick building with open sided waiting area and platform. Some part of the walls is using faced bricks as it walls finishes. The building houses the station master's office, waiting area, ticket area and also signals office.</p>		

<b>NAME: Holland Road</b>	<b>YEAR OPEN: January 1903</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Holland Road Station, Singapore</b>	<b>CAT. NO: 63</b>
 <p>Map 63 The yellow dot on map show Holland Road Station, Urban Redevelopment Authority, Singapore [93]</p>		<b>PHOTOGRAPHS:</b>  <p>No pictures found.</p>		
<b>BUILDING HISTORY;</b>  <p>Holland Road Station was opened on January 1903 to connect from Woodlands Station to Tank Road Station with a distance of 16.79miles.</p> <p><b>CURRENT SITUATION:</b> The line was realigned in 1932 and the station was closed and demolished in 1930.</p>		<b>PLAN:</b>  <p>No old plans and drawings could be found.</p>	<b>MAIN FAÇADE:</b>  <p>No pictures found.</p>	
		<b>BUILDING DESCRIPTION:</b>  <p>No description.</p>		

<b>NAME:</b> Cluny	<b>YEAR OPEN:</b> January 1903 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Cluny Station, Singapore.	<b>CAT. NO:</b> 64
 <p>Map 64 The yellow dot on the map of Municipal Area, Singapore, 1924 show Cluny Station, (<a href="http://www.nas.gov.sg/archivesonline/maps_building_plans/record-details/f97f83c9-115c-11e3-83d5-0050568939ad">http://www.nas.gov.sg/archivesonline/maps_building_plans/record-details/f97f83c9-115c-11e3-83d5-0050568939ad</a>)</p>		<b>PHOTOGRAPHS:</b>  <p>No pictures found.</p>		
<b>BUILDING HISTORY;</b>  <p>Cluny Station was opened on January 1903 to connect from Woodlands Station to Tank Road Station with a distance of 16.79miles.</p> <p><b>CURRENT SITUATION:</b> The line was realigned in 1932 and the station was closed and demolished.</p>		<b>PLAN:</b>  <p>No old plans and drawings could be found.</p>	<b>MAIN FAÇADE:</b>  <p>No pictures found.</p>	
		<b>BUILDING DESCRIPTION:</b>  <p>No description.</p>		

<b>NAME:</b> Newton	<b>YEAR OPEN:</b> January 1903 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Newton Station, Singapore	<b>CAT. NO:</b> 65
 <p>Map 65 The yellow dot on map show Newton Station, Urban Redevelopment Authority, Singapore [93]</p>		<b>PHOTOGRAPHS:</b>  <p>Image 89 Image of the Newton Station during its early years [98]</p>		
<b>BUILDING HISTORY;</b>  Newton Station was opened on January 1903 to connect from Woodlands Station to Tank Road Station with a distance of 16.79miles.  <b>CURRENT SITUATION:</b> The line was realigned in 1932 and the station was demolished.		<b>PLAN:</b>  No old plans and drawings could be found.	<b>MAIN FAÇADE:</b>  No pictures found.	
		<b>BUILDING DESCRIPTION:</b>  According to the photo shown above, it can be seen that there were two platforms at the station. The building seems to have a rectangular floor plan with interlocking gable roofs. It is a single storey timber building. It also has decorative fascia board at the roof eaves.		



<b>NAME:</b> Tank Road	<b>YEAR OPEN:</b> January 1903 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Tank Road Station, Singapore	<b>CAT. NO:</b> 66
 <p>Map 66 The yellow dot on map show Newton Station, Urban Redevelopment Authority, Singapore [93]</p>		<b>PHOTOGRAPHS:</b>  <p>Image 90 Tank Road Station circa 1905 [93]</p>		
<b>BUILDING HISTORY;</b>  Tank Road Station was opened on January 1903 to connect from Woodlands Station to Tank Road Station with a distance of 16.79miles.		<b>PLAN:</b>  No old plans and drawings could be found.	<b>MAIN FAÇADE:</b>  No pictures found.	
<b>CURRENT SITUATION:</b> The line was realigned in 1932 and the station was demolished.		<b>BUILDING DESCRIPTION:</b>  According to the photo shown above, it can be seen that the station building has a rectangular building plan covered with two interlocking gable roofs in the middle of the building. In the middle of the building also located a clock tower of square shaped. It also can be seen that there were decorative fascia boards at the roof eaves.		

<b>NAME:</b> Tank Road	<b>YEAR OPEN:</b> January 1903 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Tank Road Station, Singapore	<b>CAT. NO:</b> 66.1.1
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**PHOTOGRAPHS:**



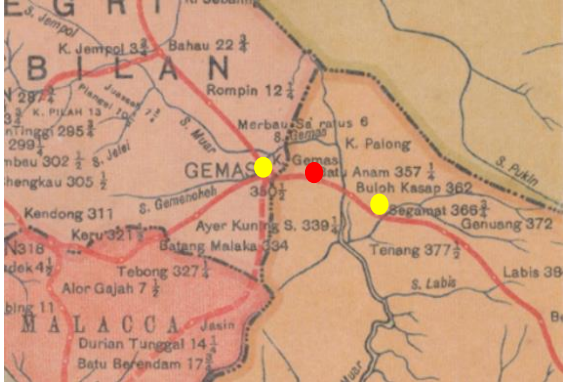
Image 91 Tank Road Station circa 1903 with jinkirisha waited at the front entrance [99]



Image 92 The ambience of the street in front of the Tank Road Station circa 1903 [99]

<b>NAME:</b> Batu Anam	<b>YEAR OPEN:</b> 1.3.1908 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Batu Anam Station, Johor.	<b>CAT. NO:</b> 67.1
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**PHOTOGRAPHS:**



Map 67.1 The red dot on FMSR Construction Map dated 1919 show Batu Anam Station (Malaysia National Archives).



Image 93 Batu Anam Old Station which now already torn down and flattened dated 2010 [100]

**BUILDING HISTORY;**

Batu Anam Station was opened on 1<sup>st</sup> March 1908 connecting the line from Gemas Station to Segamat Station (yellow dot on map). This station was the first stop after Gemas Station. It was demolished after the new station being built next to it.

**CURRENT SITUATION:** Demolished

**PLAN:**

No old plans and drawings could be found.

**MAIN FAÇADE:**

No pictures found.

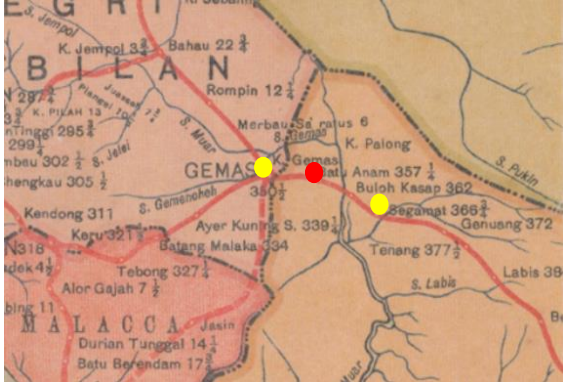
**BUILDING DESCRIPTION:**

According to the photo shown above, it can be seen that the station building has a rectangular building plan covered with gable roof. The station was made from timber.



<b>NAME:</b> Batu Anam	<b>YEAR OPEN:</b> 1.3.1908 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Batu Anam Station, Johor.	<b>CAT. NO:</b> 67.2
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**PHOTOGRAPHS:**



Map 67.2 The red dot on FMSR Construction Map dated 1919 show Batu Anam Station (Malaysia National Archives)



Image 94 Batu Anam Station



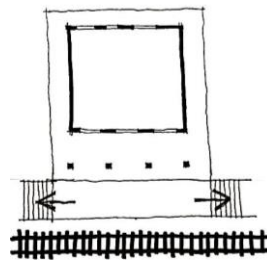
Image 95 View of the station from the main road

**BUILDING INFORMATION;**

There is no information on this new Batu Anam Station. But this station no longer provided for passenger service.

**CURRENT SITUATION:** Closed and preserved.

**PLAN:**



Station includes ticket counter, office and waiting area

**MAIN FAÇADE:**

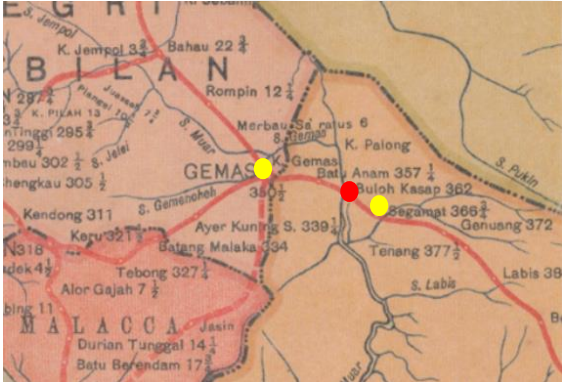


Image 96 Batu Anam Station view from the main road

**BUILDING DESCRIPTION:**

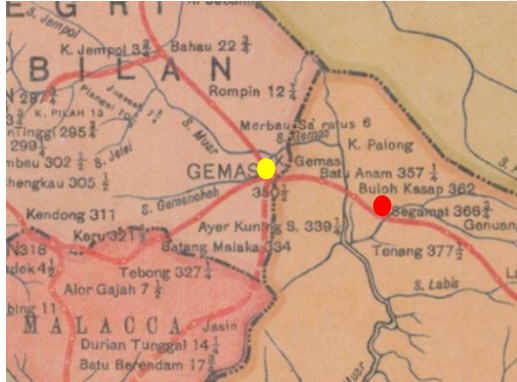
According to the photo shown above, it can be seen that the station building has a rectangular building plan covered with hipped roof. The station housed ticket counter, office and waiting area.



<b>NAME: Buloh Kasap</b>	<b>YEAR OPEN: 1.3.1908</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Buloh Kasap Station, Johor.</b>	<b>CAT. NO: 68</b>
 <p>Map 68 The red dot on FMSR Construction Map dated 1919 show Buloh Kasap Station (Malaysia National Archives)</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Buloh Kasap Station (red dot on map) was opened on 1<sup>st</sup> March 1908 connecting the line from Gemas Station to Segamat Station (yellow dots on map). This station was the second stop after Gemas Station.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Closed and Demolished</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		

<b>NAME:</b> Segamat	<b>YEAR OPEN:</b> 1.3.1908 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Segamat Station, Jalan Station, 85000 Segamat, Johor.	<b>CAT. NO:</b> 69
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**PHOTOGRAPHS:**



Map 69 The red dot on FMSR Construction Map dated 1919 show Segamat Station (Malaysia National Archives)



Image 97 View towards the restaurant and platform



Image 98 View towards the waiting area

**BUILDING HISTORY;**

Segamat Station was opened on 1<sup>st</sup> March 1908 connecting the line from Gemas Station to Segamat Station. This station was named after the town of Segamat.

**CURRENT SITUATION :** Still in Operation

**PLAN:**

No old plans and drawings could be found.




**MAIN FAÇADE:**




Image 99 Station restaurant located at the right side of the building


**BUILDING DESCRIPTION:**

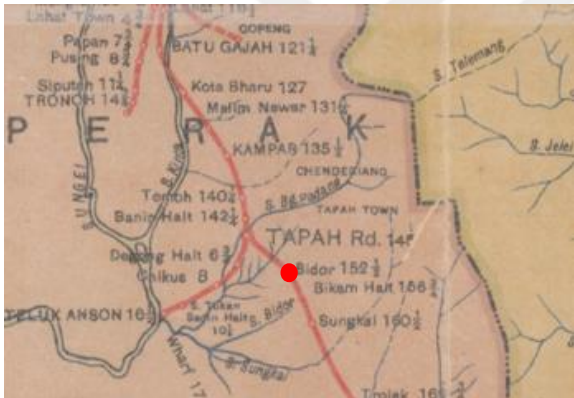
According to the photo show above, the station building has a rectangular building plan but it was divided into two parts. The first part which was the main part covered with hipped roof which housed restaurant, open waiting area, ticketing office, and platform. The other parts as seen in Image 99, the building covered with gable roof connecting with half circular roof to connect with the man building.

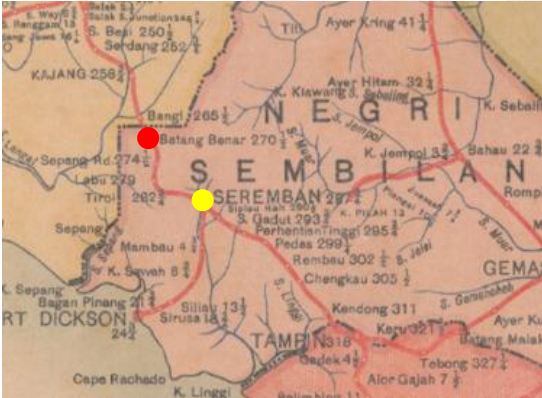
<b>NAME: Bukit Merah</b>	<b>YEAR OPEN: 1.2.1902</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Bukit Merah Station, 34400, Perak.</b>	<b>CAT. NO: 70</b>
 <p>Map 70 The red dot on FMSR Construction Map dated 1919 show Bukit Merah Station (Malaysia National Archives)</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 100 View from the track towards station building of timber construction</p>  <p>Image 101 View of the station with train signaling area inside the timber cage</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Bukit Merah Station was opened on 1<sup>st</sup> February 1902 to connect between two station, Alor Pongsu Station and Pondok Tanjong Station.</p> <p><b>CURRENT SITUATION:</b> Closed for operation on 30<sup>th</sup> July 2013 and demolished.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
		<p><b>BUILDING DESCRIPTION:</b></p> <p>According to the photo show above, the station building has an L-shaped building plan covered with two gable roofs interlocking with each other. The station building was made from timber.</p>		

<b>NAME:</b> Ayer Kuning North	<b>YEAR OPEN:</b> 1.5.1902 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Ayer Kuning North Station, Perak.	<b>CAT. NO:</b> 71
 <p>Map 71 The red dot on FMSR Construction Map dated 1919 show Ayer Kuning North Station (Malaysia National Archives)</p>		<b>PHOTOGRAPHS:</b>  No pictures found.		
<b>BUILDING HISTORY;</b>  Ayer Kuning North Station was opened on 1 <sup>st</sup> May 1902 to connect from Taiping Station.  <b>CURRENT SITUATION :</b> Demolished	<b>PLAN:</b>  No old plans and drawings could be found.		<b>MAIN FAÇADE:</b>  No pictures found.	
	<b>BUILDING DESCRIPTION:</b>  No description.			



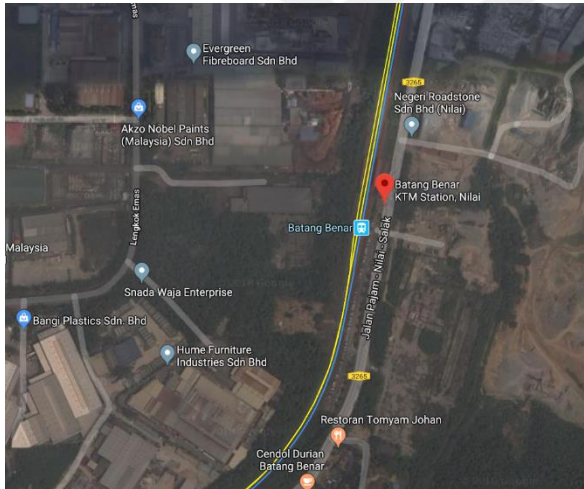
<b>NAME:</b> Bukit Gantang	<b>YEAR OPEN:</b> 1.5.1902 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Bukit Gantang Station, 34030, Perak.	<b>CAT. NO:</b> 72
 <p>Map 72 The red dot on FMSR Construction Map dated 1919 show Bt. Gantang Station (Malaysia National Archives).</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Bukit Gantang Station was opened on 1<sup>st</sup> May 1902 to connect from Taiping Station through Ayer Kuning North Station.</p> <p><b>CURRENT SITUATION :</b> Demolished</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		

<b>NAME: Bidor</b>	<b>YEAR OPEN: 1.5.1902</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Bidor Station, Perak.</b>	<b>CAT. NO: 73</b>
 <p>Map 73 The red dot on FMSR Construction Map dated 1919 show Bidor Station (Malaysia National Archives)</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Bidor Station was opened on 1<sup>st</sup> May 1902 to connect from Tapah Road Station with a distance of 7.58miles. The station was named after the town, Bidor.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION :</b> Demolished</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		

<b>NAME:</b> Batang Benar	<b>YEAR OPEN:</b> 2.4.1903 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Batang Benar Station, Negeri Sembilan	<b>CAT. NO:</b> 74.1
 <p>Map 74.1 The red dot on FMSR Construction Map dated 1919 show Batang Benar Station (Malaysia National Archives)</p>		<b>PHOTOGRAPHS:</b>  <p>No pictures found.</p>		
<b>BUILDING HISTORY;</b>  Batang Benar Station (red dot on map) was opened on 2 <sup>nd</sup> April 1903 connecting the station to Seremban Station (yellow dot on map). Together with this line were, Sepang Station, Labu Station and Tiroi Station before reaching Seremban Station.		<b>PLAN:</b>  <p>No old plans and drawings could be found.</p>	<b>MAIN FAÇADE:</b>  <p>No pictures found.</p>	
<b>CURRENT SITUATION :</b> Demolished		<b>BUILDING DESCRIPTION:</b>  <p>No description.</p>		

<b>NAME: Batang Benar</b>	<b>YEAR OPEN: ? YEAR BUILT: 1995</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Batang Benar Station, Negeri Sembilan</b>	<b>CAT. NO: 74.2</b>
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**PHOTOGRAPHS:**



Map 74.2 The red dot show Batang Benar Station (<https://www.google.com/maps/place/Batang+Benar>, 19.4.2018)



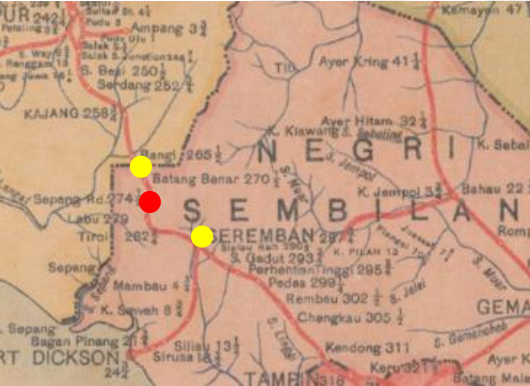
Image 102 Batang Benar Station in 2010 [79]

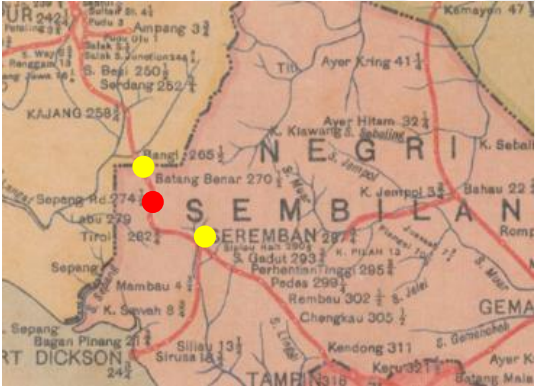
**BUILDING INFORMATION;**

Batang Benar Station was rebuilt in 1995 for double tracking electrification for Rawang – Seremban Line KTM Komuter.

**CURRENT SITUATION:** In Operation

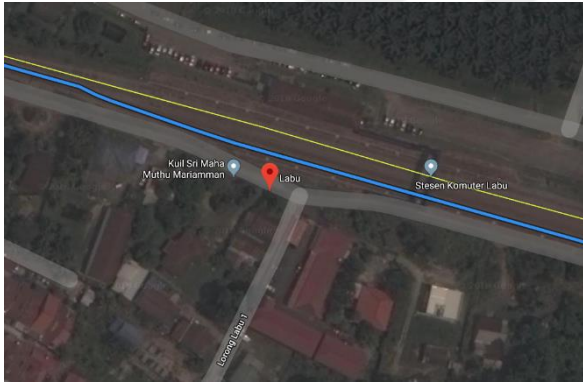


<b>NAME:</b> Sepang	<b>YEAR OPEN:</b> 2.4.1903 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Sepang Station, Negeri Sembilan.	<b>CAT. NO:</b> 75
 <p>Map 75 The red dot on FMSR Construction Map dated 1919 show Batang Benar Station (Malaysia National Archives)</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Sepang Station (red dot on map) was opened on 2<sup>nd</sup> April 1903 connecting the station from Batang Benar Station to Seremban Station (yellow dots on map). Together with this line were, Labu Station and Tiroi Station before reaching Seremban Station.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION :</b> Demolished</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		

<b>NAME:</b> Labu	<b>YEAR OPEN:</b> 2.4.1903 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Labu Station, Batu 10, 71900 Labu, Negeri Sembilan.	<b>CAT. NO:</b> 76.1
 <p>Map 76.1 The red dot on FMSR Construction Map dated 1919 show Labu Station (Malaysia National Archives)</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Labu Station (red dot on map) was opened on 2<sup>nd</sup> April 1903 connecting the station from Batang Benar Station to Seremban Station (yellow dots on map). Together with this line were, Sepang Station and Tiroi Station before reaching Seremban Station.</p> <p><b>CURRENT SITUATION:</b> Demolished.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		

<b>NAME:</b> Labu	<b>YEAR OPEN:</b> - <b>YEAR BUILT:</b> 1995	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Labu Station, Batu 10, 71900 Labu, Negeri Sembilan.	<b>CAT. NO:</b> 76.2
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**PHOTOGRAPHS:**



Map 76.2 The red dot show Labu Station  
(<https://www.google.com/maps/place/Labu>, 19.4.2018)



Image 103 Station from the track [79]

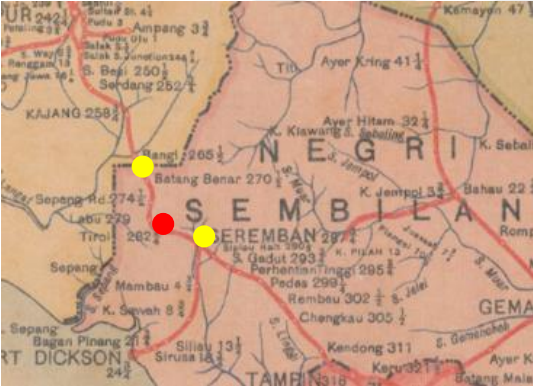
**BUILDING INFORMATION;**

Labu Station rebuilt in 1995 for double tracking electrification for Rawang – Seremban Line KTM Komuter.

**CURRENT SITUATION:** In Operation



Image 104 Station signage [79]

<b>NAME: Tiroi</b>	<b>YEAR OPEN: 2.4.1903</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Tiroi Station, Negeri Sembilan.</b>	<b>CAT. NO: 77.1</b>
 <p>Map 77.1 The red dot on FMSR Construction Map dated 1919 show Tiroi Station (Malaysia National Archives)</p>		<b>PHOTOGRAPHS:</b>  <p>No pictures found.</p>		
<b>BUILDING HISTORY;</b>  <p>Tiroi Station (red dot on map) was opened on 2<sup>nd</sup> April 1903 connecting the station from Batang Benar Station to Seremban Station (yellow dots on map). Together with this line were, Sepang Station and Labu Station before reaching Seremban Station.</p>		<b>PLAN:</b>  <p>No old plans and drawings could be found.</p>	<b>MAIN FAÇADE:</b>  <p>No pictures found.</p>	
<b>CURRENT SITUATION :</b> Demolished		<b>BUILDING DESCRIPTION:</b>  <p>No description.</p>		



<b>NAME:</b> Tiroi	<b>YEAR OPEN:</b> - <b>YEAR BUILT:</b> 1995	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Tiroi Station, Negeri Sembilan.	<b>CAT. NO:</b> 77.2
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**PHOTOGRAPHS:**



Map 77.2 The red dot on FMSR Construction Map dated 1919 show Tiroi Station (Malaysia National Archives)



Image 105 Tiroi Station


**BUILDING INFORMATION;**

Tiroi Station was rebuilt in 1995 for double tracking electrification for Rawang – Seremban Line KTM Komuter.

**CURRENT SITUATION :** In Operation



Image 106 Tiroi Station

<b>NAME:</b> Sungkai	<b>YEAR OPEN:</b> 15.7.1903 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Sungkai Station, 35600 Sungkai, Perak.	<b>CAT. NO:</b> 78.1
 <p>Map 78.1 The red dot on FMSR Construction Map dated 1919 show Sungkai Station (Malaysia National Archives).</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Sungkai Station (red dot on map) was opened on 15<sup>th</sup> July 1903 connecting from Bidor Station (yellow dot on map).</p> <p><b>CURRENT SITUATION:</b> Demolished.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		

<b>NAME:</b> Sungkai	<b>YEAR OPEN:</b> March 2007 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Sungkai Station, 35600 Sungkai, Perak.	<b>CAT. NO:</b> 78.2
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Map 78.2 The red dot on Google Map shows the Sungkai Station, (Google Map retrieved on 8 January 2015)

**BUILDING INFORMATION;**

Sungkai Station was reopened in March 2007. The station was rebuilt as part of the Double Electrified Tracking Project between Rawang and Ipoh line.

**CURRENT SITUATION:** In Operation.

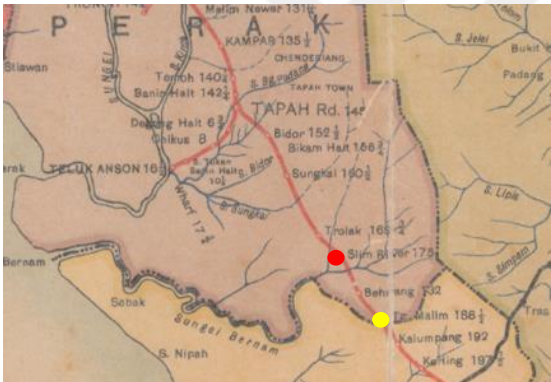
**PHOTOGRAPHS:**



Image 107 View of the new station

<b>NAME:</b> Slim River	<b>YEAR OPEN:</b> 15.7.1903 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Slim River Station, Station Road, 35800 Perak.	<b>CAT. NO:</b> 79.1
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**PHOTOGRAPHS:**



Map 80.1 The red dot on FMSR Construction Map dated 1919 show Slim River Station (Malaysia National Archives)



Image 108 View of the station.

**BUILDING HISTORY;**

Slim River Station was opened on 15<sup>th</sup> July 1903, connected to Tanjong Malim Station (yellow dot in map). The station was named after the town, Slim River (red dot on map).

**CURRENT SITUATION :** Demolished

**PLAN:**

No old plans and drawings could be found.



**MAIN FAÇADE:**

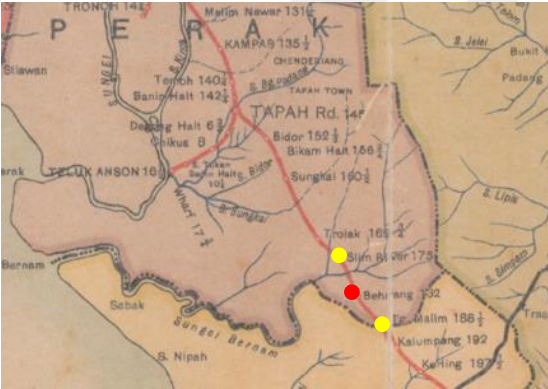

No pictures found.

**BUILDING DESCRIPTION:**

According to the photo show above, the station building has a rectangular building plan covered with gable roof. It was a single storey timber station building, The roof was supported by knee braces. The double panels' timber windows were used and it has the upper part ventilations of timber louvered.



<b>NAME:</b> Slim River	<b>YEAR OPEN:</b> March 2007 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Slim River Station, Station Road, 35800 Perak.	<b>CAT. NO:</b> 79.2
 <p>Map 80.2 The red dot on Google Map shows the Slim River Station, (Google Map retrieved on 8 January 2015)</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 109 View of the station</p>		
<p><b>BUILDING INFORMATION;</b></p> <p>Slim River Station was rebuilt and opened on March 2007 as part of the electrified double tracking project between Rawang and Ipoh. It was made prior to the Rawang-Ipoh Electrified Double Tracking Project.</p> <p><b>CURRENT SITUATION:</b> In Operation.</p>				

<b>NAME:</b> Behrang	<b>YEAR OPEN:</b> 15.7.1903 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Behrang Station, Perak.	<b>CAT. NO:</b> 80.1
 <p>Map 80.1 The red dot on FMSR Construction Map dated 1919 show Behrang Station (Malaysia National Archives)</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 110 View of the station from the track [76]</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Slim River Station was opened on 15<sup>th</sup> July 1903, connected to Tanjong Malim Station (yellow dot in map). The station was named after the town, Slim River (red dot on map).</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION :</b> Demolished</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>According to the photo shown above, it was a single storey timber station building. The station is rectangular in plan and covered with hip gabled roof. The roof tiles were of red clay roof tiles.</p>		

<b>NAME:</b> Behrang	<b>YEAR OPEN:</b> March 2007 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Behrang Station, Perak.	<b>CAT. NO:</b> 80.2
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Map 80.2 The red dot on the Google Map show Behrang Station, (Google Map retrieved on 8 January 2015)

**PHOTOGRAPHS:**

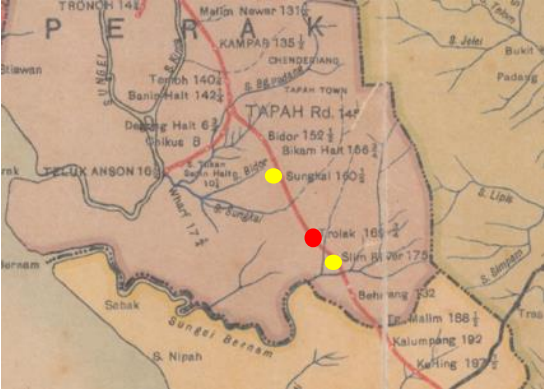


Image 111 Image of new Behrang Station that was already closed for operation

**BUILDING INFORMATION;**


Behrang new station was rebuilt and opened on March 2007 as part of the electrified double tracking project between Rawang and Ipoh. It was made prior to the Rawang-Ipoh Electrified Double Tracking Project.



**CURRENT SITUATION:** Closed for operation.


<b>NAME:</b> Trolak	<b>YEAR OPEN:</b> 15.8.1903 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Trolak Station, Perak	<b>CAT. NO:</b> 81
 <p>Map 81 The red dot on FMSR Construction Map dated 1919 show Trolak Station (Malaysia National Archives)</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Trolak Station (red dot in map) was opened on 15<sup>th</sup> August 1903 to connect Sungkai Station and Slim River Station (yellow dots in map).</p> <p><b>CURRENT SITUATION :</b> Demolished</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		



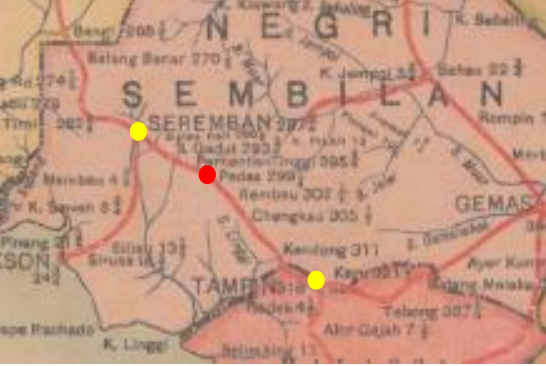
<b>NAME:</b> Batu Road	<b>YEAR OPEN:</b> 15.2.1905 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Batu Road Station, Kuala Lumpur.	<b>CAT. NO:</b> 82
No pictures found.		<b>PHOTOGRAPHS:</b>  No pictures found.		
<b>BUILDING HISTORY;</b>  Batu Road Station was opened on 15 <sup>th</sup> February 1905 connecting from Batu Junction Station.	<b>PLAN:</b>  No old plans and drawings could be found.	<b>MAIN FAÇADE:</b>  No pictures found.		
<b>CURRENT SITUATION:</b> Demolished	<b>BUILDING DESCRIPTION:</b>  No description.			



<b>NAME:</b> Sungei Gadut	<b>YEAR OPEN:</b> 15.7.1905 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Sungei Gadut Station, Negeri Sembilan.	<b>CAT. NO:</b> 83.1
 <p>Map 83.1 The red dot on FMSR Construction Map dated 1919 show Sungei Gadut Station (Malaysia National Archives).</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Sungei Gadut Station (red dot on map) was opened 15<sup>th</sup> July 1905 in order to connect the Seremban Tampin line (yellow dots in map). There were 6 stations built before reaching the Tampin Station from Seremban Station.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Demolished</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		

<b>NAME:</b> Sungei Gadut	<b>YEAR OPEN:</b> May 2011 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Sungei Gadut Station, Negeri Sembilan.	<b>CAT. NO:</b> 83.2
 <p>Map 83.2 The red dot show Sungei Gadut Station (<a href="https://www.google.com/maps/search/sungei+gadut">https://www.google.com/maps/search/sungei+gadut</a>, 19.4.2018)</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 112 Image of the elevated Sungei Gadut Station</p>		
<p><b>BUILDING INFORMATION;</b></p> <p>Sungei Gadut new station was built and opened on May 2011 as part of the electrified double tracking project between Seremban and Gemas.</p> <p><b>CURRENT SITUATION:</b> In operation with a new station but the station change to become Komuter Station.</p>				

<b>NAME:</b> Perhentian Tinggi	<b>YEAR OPEN:</b> 15.7.1905 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Perhentian Tinggi Station, Negeri Sembilan.	<b>CAT. NO:</b> 84
 <p>Map 84 The red dot on FMSR Construction Map dated 1919 show Perhentian Tinggi Station (Malaysia National Archives).</p>		<b>PHOTOGRAPHS:</b>  <p>No pictures found.</p>		
<b>BUILDING HISTORY;</b>  <p>Perhentian Tinggi Station (red dot on map) was opened 15<sup>th</sup> July 1905 in order to connect the Seremban Tampin line (yellow dots on map). There were 6 stations built before reaching the Tampin Station from Seremban Station.</p> <p><b>CURRENT SITUATION:</b> Closed in 9.12.1934 and Demolished.</p>		<b>PLAN:</b>  <p>No old plans and drawings could be found.</p>	<b>MAIN FAÇADE:</b>  <p>No pictures found.</p>	<b>BUILDING DESCRIPTION:</b>  <p>No description.</p>



<b>NAME:</b> Pedas	<b>YEAR OPEN:</b> 15.7.1905 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Pedas Station, Negeri Sembilan.	<b>CAT. NO:</b> 85
 <p>Map 85 The red dot on FMSR Construction Map dated 1919 show Pedas Station (Malaysia National Archives).</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Pedas Station (red dot on map) was opened 15<sup>th</sup> July 1905 in order to connect the Seremban Tampin line (yellow dots on map). There were 6 stations built before reaching the Tampin Station from Seremban Station.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Closed and Demolished.</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		

<b>NAME:</b> Rembau	<b>YEAR OPEN:</b> 15.7.1905 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Rembau Station, Jalan Stesen, 71300 Rembau, Negeri Sembilan	<b>CAT. NO:</b> 86.1
 <p>Map 86.1 The red dot on FMSR Construction Map dated 1919 show Rembau Station (Malaysia National Archives).</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 113 Rembau Station before being demolished [100]</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Rembau Station (red dot on map) was opened 15<sup>th</sup> July 1905 in order to connect the Seremban Tampin line (yellow dots on map). There were 6 stations built before reaching the Tampin Station from Seremban Station.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Closed and Demolished.</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>According to the photo show above, the station building has a rectangular building plan covered with gable roof.</p>		

<b>NAME:</b> Rembau	<b>YEAR OPEN:</b> January 2009 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Rembau Station, Jalan Stesen, 71300 Rembau, Negeri Sembilan	<b>CAT. NO:</b> 86.2
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**PHOTOGRAPHS:**



Map 86.2 Location Map of the Rembau Station, (Google Map retrieved on 8 January 2015)

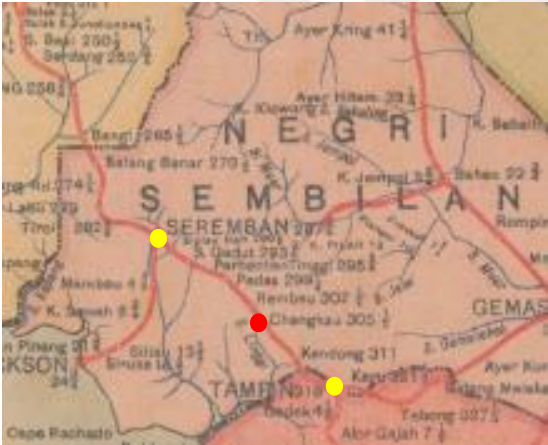


Image 114 The newly operated Rembau Station

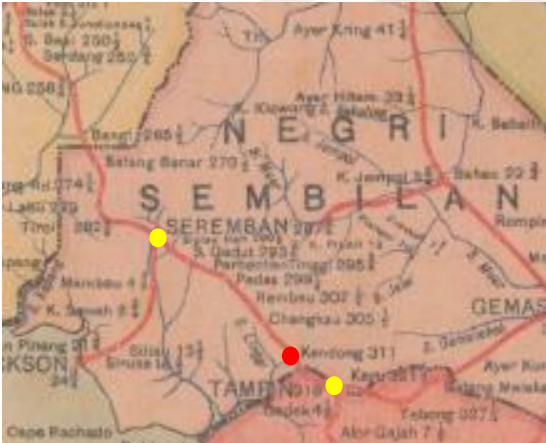

**BUILDING INFORMATION;**

Rembau Station was built and opened on January 2009 as part of the Electrified Double Tracking Project on Seremban Gemas line.

**CURRENT SITUATION :** In Operation

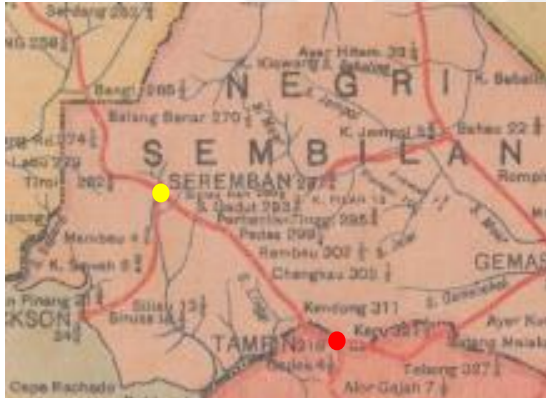
<b>NAME:</b> Chengkau	<b>YEAR OPEN:</b> 15.7.1905 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Chengkau Station, Negeri Sembilan	<b>CAT. NO:</b> 87
 <p>Map 87 The red dot on FMSR Construction Map dated 1919 show Chengkau Station (Malaysia National Archives)</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Chengkau Station (red dot on map) was opened 15<sup>th</sup> July 1905 in order to connect the Seremban Tampin line (yellow dots on map). There were 6 stations built before reaching the Tampin Station from Seremban Station.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION :</b> Closed and Demolished</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>According to the photo show above, the station building has a rectangular building plan covered with gable roof.</p>		



<b>NAME:</b> Kendong	<b>YEAR OPEN:</b> 15.7.1905 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Kendong Station, Negeri Sembilan	<b>CAT. NO:</b> 88
 <p>Map 88 The red dot on FMSR Construction Map dated 1919 show Kendong Station (Malaysia National Archives)</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 115 View from the track whereby the station being abandoned [76]</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Kendong Station (red dot on map) was opened 15<sup>th</sup> July 1905 in order to connect the Seremban Tampin line (yellow dots on map). There were 6 stations built before reaching the Tampin Station from Seremban Station.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION :</b> Closed and Demolished</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>According to the photo show above, the station building has a rectangular building plan covered with gable roof.</p>		

<b>NAME:</b> Tampin / Pulau Sebang	<b>YEAR OPEN:</b> 15.7.1905 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Tampin / Pulau Sebang, Station Road, Melaka	<b>CAT. NO:</b> 89.1
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**PHOTOGRAPHS:**



Map 89.1 The red dot on FMSR Construction Map dated 1919 show Tampin Station (Malaysia National Archives)



Image 116 Tampin Station looking north with overhead pedestrian bridges [71]



**BUILDING HISTORY;**

Tampin station (red dot on map) was opened 15<sup>th</sup> July 1905 in order to connect the Seremban Tampin line (yellow dots on map). There were 6 stations built before reaching the Tampin Station from Seremban Station. The station named after the border towns of Pulau Sebang, Melaka and Tampin, Negeri Sembilan. It was dismantled by the Japanese in World War II. The old station building was demolished on 11 April 2013 after 108 years of operations.

**CURRENT SITUATION :** Demolished



Image 117 Tampin Station on August 1954 [71]

<b>NAME:</b> Tampin / Pulau Sebang	<b>YEAR OPEN:</b> 15.7.1905 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Tampin / Pulau Sebang, Station Road, Melaka	<b>CAT. NO:</b> 89.1.1
				
Image 118 Tampin Station looking north [71]		Image 119 Tampin Station in 2010 [71]		
<b>PLAN:</b>  No old plans and drawings were found.	<b>MAIN FAÇADE:</b>  No pictures found.			
<b>BUILDING DESCRIPTION:</b>  <p>According to the photo shown at previous page, it can be seen that the station building is a single storey timber building. It was a rectangular plan covered with gable roof. There are decorative fascia boards at its roof eaves. This station building was connected to the other platform with pedestrian overhead bridge.</p> <p>According to the photo shown above, the two storey building might be the cabin signaling tower. On the far right, can be seen a single storey timber station building.</p>				



<b>NAME:</b> Tampin / Pulau Sebang	<b>YEAR OPEN:</b> - <b>YEAR BUILT:</b> 1995	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Tampin / Pulau Sebang, Station Road, Melaka	<b>CAT. NO:</b> 89.2
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**PHOTOGRAPHS:**



Map 89.2 Location Map of the Tampin Station, (Google Map retrieved on 8 January 2015)




Image 120 Image of Tampin/ Pulau Sebang Station


**BUILDING INFORMATION;**




In 1995, a reconstruction for the Seremban-Gemas double tracking project. It moves out to the new building.

**CURRENT SITUATION:** In Operation.



<b>NAME:</b> Keru	<b>YEAR OPEN:</b> 1.10.1906 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Keru Station, Melaka.	<b>CAT. NO:</b> 90
 <p>Map 90 The red dot on FMSR Construction Map dated 1919 show Keru Station (Malaysia National Archives)</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Keru Station was opened on 1<sup>st</sup> October 1906 as part of the construction of the Tampin - Gemas line (yellow dots in map). There were 4 intermediate stations along the line, Keru Station (red dot in map), Tebong Station, Batang Melaka Station and Ayer Kuning Station.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION :</b> Closed and Demolished</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		

<b>NAME:</b> Tebong	<b>YEAR OPEN:</b> 1.10.1906 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Tebong Station, Melaka.	<b>CAT. NO:</b> 91
 <p>Map 91 The red dot on FMSR Construction Map dated 1919 show Tebong Station (Malaysia National Archives)</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Tebong Station was opened on 1<sup>st</sup> October 1906 as part of the construction of the Tampin - Gemas line (yellow dots in map). There were 4 intermediate stations along the line, Keru Station, Tebong Station (red dot in map), Batang Melaka Station and Ayer Kuning Station.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION :</b> Closed and Demolished</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		

<b>NAME:</b> Batang Melaka	<b>YEAR OPEN:</b> 1.10.1906 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Batang Melaka Station, Melaka	<b>CAT. NO:</b> 92.1
 <p>Map 92.1 The red dot on FMSR Construction Map dated 1919 show Batang Melaka Station (Malaysia National Archives)</p>		<b>PHOTOGRAPHS:</b> <div style="display: flex; justify-content: space-around;"> <div>  <p>Image 121 The station from the main road</p> </div> <div>  <p>Image 122 View towards the station's ticket</p> </div> </div>		
<b>BUILDING HISTORY;</b> Batang Melaka Station was opened on 1 <sup>st</sup> October 1906 as part of the construction of the Tampin - Gemas line (yellow dots in map). There were 4 intermediate stations along the line, Keru Station, Tebong Station, Batang Melaka Station (reddot in map), and Ayer Kuning Station. The Batang Melaka station named after the town of Batang Melaka, Jasin, Malacca.		<b>PLAN:</b> <p>No old plans and drawings could be found.</p>	<b>MAIN FAÇADE:</b> <p>No pictures found.</p>	
<b>CURRENT SITUATION:</b> Closed in May 2012 and Preserved.		<b>BUILDING DESCRIPTION:</b> <p>According to the photo shown above, the station building was located up the hill. It has rectangular building plan and a bricks station building.</p>		

<b>NAME: Batang Melaka</b>	<b>YEAR OPEN: 7.2.2014</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Batang Melaka Station, Melaka</b>	<b>CAT. NO: 92.2</b>
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**PHOTOGRAPHS:**



Map 92.2 Location Map of the Batang Melaka Station, (Google Map retrieved on 8 January 2015)




Image 123 The new Batang Melaka Station


**BUILDING INFORMATION;**

Batang Melaka Station was opened on 7th February 2014 as part of the Seremban-Gemas Electrified Double Tracking Project.

**CURRENT SITUATION:** In Operation.



<b>NAME:</b> Ayer Kuning.	<b>YEAR OPEN:</b> 1.10.1906 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Ayer Kuning Station, Negeri Sembilan.	<b>CAT. NO:</b> 93
 <p>Map 93 The red dot on FMSR Construction Map dated 1919 show Ayer Kuning Station (Malaysia National Archives)</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>Ayer Kuning Station was opened on 1<sup>st</sup> October 1906 as part of the construction of the Tampin - Gemas line (refer yellow dots in map). There were 4 intermediate stations along the line, Keru Station, Tebong Station, Batang Melaka Station and Ayer Kuning Station (red dot in map).</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
<p><b>CURRENT SITUATION:</b> Closed and Demolished</p>		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		

<b>NAME:</b> Gemas	<b>YEAR OPEN:</b> 1.10.1906 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Gemas Station, Station Road, 73400 Gemas, Negeri Sembilan.	<b>CAT. NO:</b> 94.1
 <p>Map 94.1 The red dot on FMSR Construction Map dated 1919 show Gemas Station (Malaysia National Archives)</p>		<p><b>PHOTOGRAPHS:</b></p> <p>No pictures found.</p>		
<p><b>BUILDING HISTORY;</b></p> <p>The station was opened on 1<sup>st</sup> October 1906 as part of the construction of the Tampin - Gemas line (yellow dots in map). The station was named after the town of Gemas, Negeri Sembilan (red dot in map).</p> <p><b>CURRENT SITUATION:</b> Demolished.</p>		<p><b>PLAN:</b></p> <p>No old plans and drawings could be found.</p>	<p><b>MAIN FAÇADE:</b></p> <p>No pictures found.</p>	
		<p><b>BUILDING DESCRIPTION:</b></p> <p>No description.</p>		

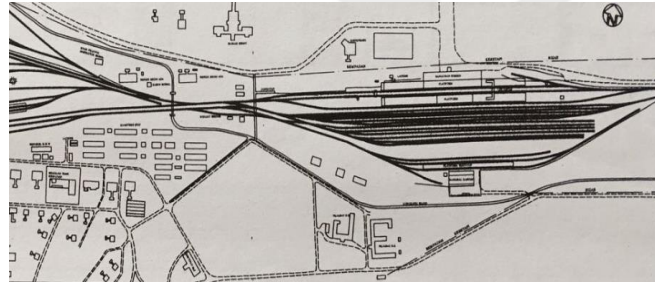
**NAME:** Gemas

**YEAR OPEN:** 1922  
**YEAR BUILT:** -

**ARCHITECT:** Unknown

**ADDRESS:** Gemas Station, Station Road, 73400  
Gemas, Negeri Sembilan.

**CAT. NO:**  
94.2



Map 94.2 Location Map of the Gemas Station [101]

**PHOTOGRAPHS:**



Figure 124 View towards the station from the track



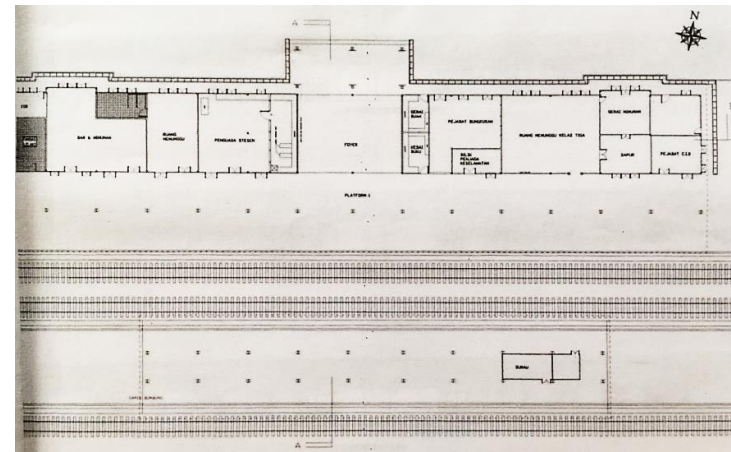
Figure 125 Part of the station still being used as a station restaurant

**BUILDING HISTORY;**

Gemas Station was opened in 1922. The station is a railway junction connecting the West Coast Line (Padang Besar, Perlis – Singapore) and the East Coast Line (Tumpat – Gemas).

**CURRENT SITUATION:** Closed and Preserved.  
The station restaurant are still running.

**PLAN:**

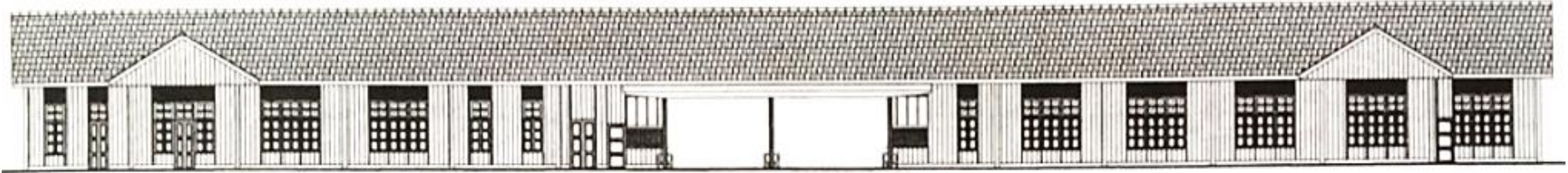


Gemas Station Ground Floor Plan shows rectangular plan with foyer located in the middle of the building connected with projecting porches. It has three railway tracks [101]

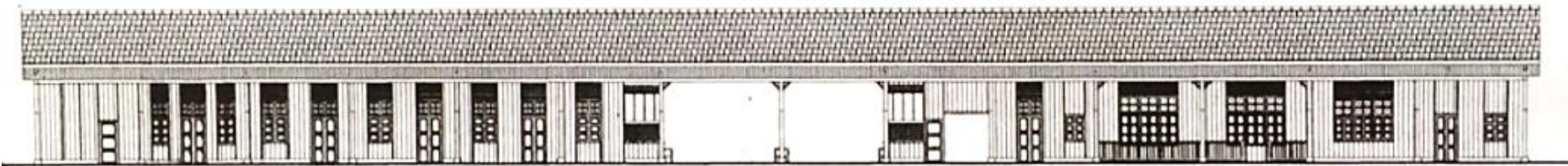
<b>NAME:</b> Gemas	<b>YEAR OPEN:</b> 1922 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Gemas Station, Station Road, 73400 Gemas, Negeri Sembilan.	<b>CAT. NO:</b> 94.2.1
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**ELEVATIONS:**

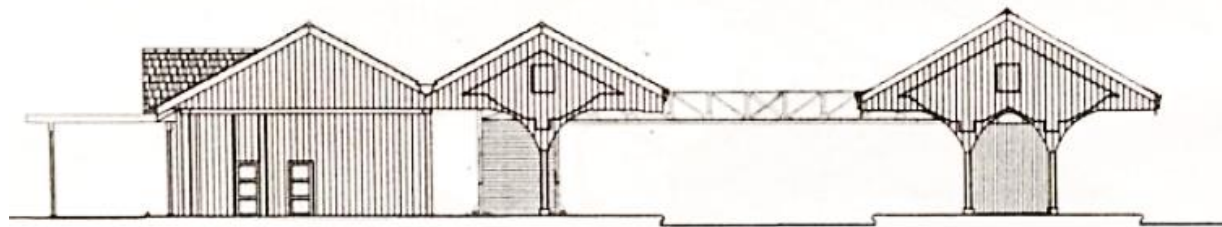
1.



Front Elevation shows symmetrical façade from the main road with projecting porch in the middle of the building. It finished with gable roof as the main roof and another two gable roof intersecting with it at both sides of the building [101]



2.Rear Elevation shows the façade view from the tracks with a series of doors and windows that have upper ventilations [101]



3.Right Elevation shows the entrance, the main building, an overhead bridges connecting between the platforms having trainsheds [101]

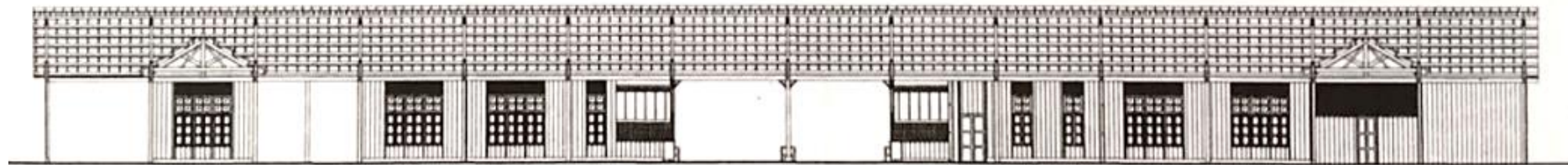


<b>NAME:</b> Gemas	<b>YEAR OPEN:</b> 1922 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Gemas Station, Station Road, 73400 Gemas, Negeri Sembilan.	<b>CAT. NO:</b> 94.2.2
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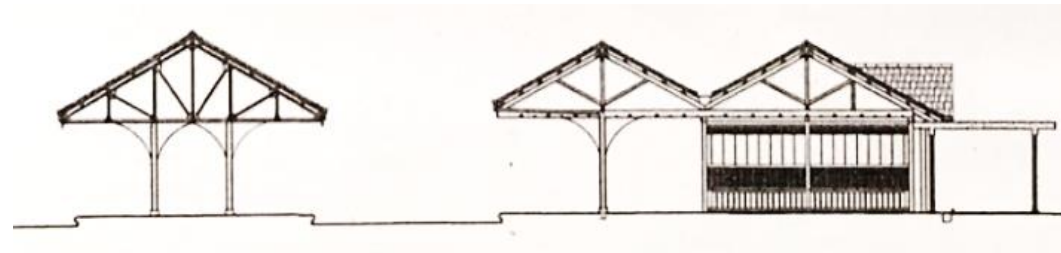
**ELEVATION AND SECTIONS:**



1. Left Elevation shows three railway tracks with two platforms [101]



2. Longitudinal Section B-B shows the roof timber structures and the interiors of the spaces [101]



3. Section A-A shows the structures of the train-sheds and the main building [101]

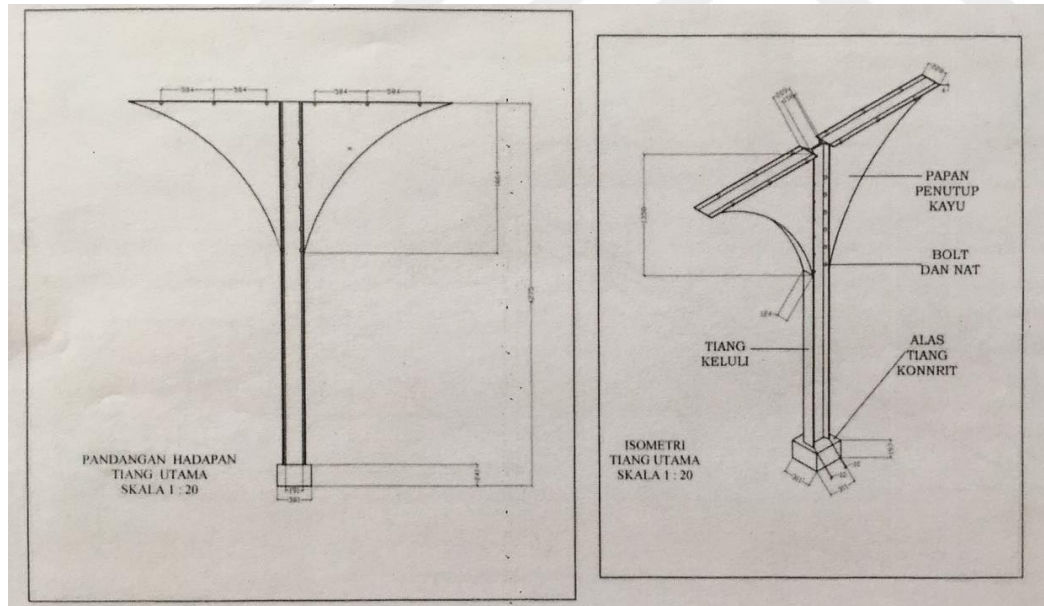
**NAME: Gemas**

**YEAR OPEN: 1922**  
**YEAR BUILT: -**

**ARCHITECT: Unknown**

**ADDRESS: Gemas Station, Station Road, 73400**  
**Gemas, Negeri Sembilan.**

**CAT. NO:**  
**94.2.3**



1. Details on the stations' column made from concrete stump, steel post with timber panel as its covering [101]



2. The image of the platforms and covered train-sheds which furnished with timber strips



3. The closed old station view from under the overhead bridges as it was slowly rotted

NAME: Gemas

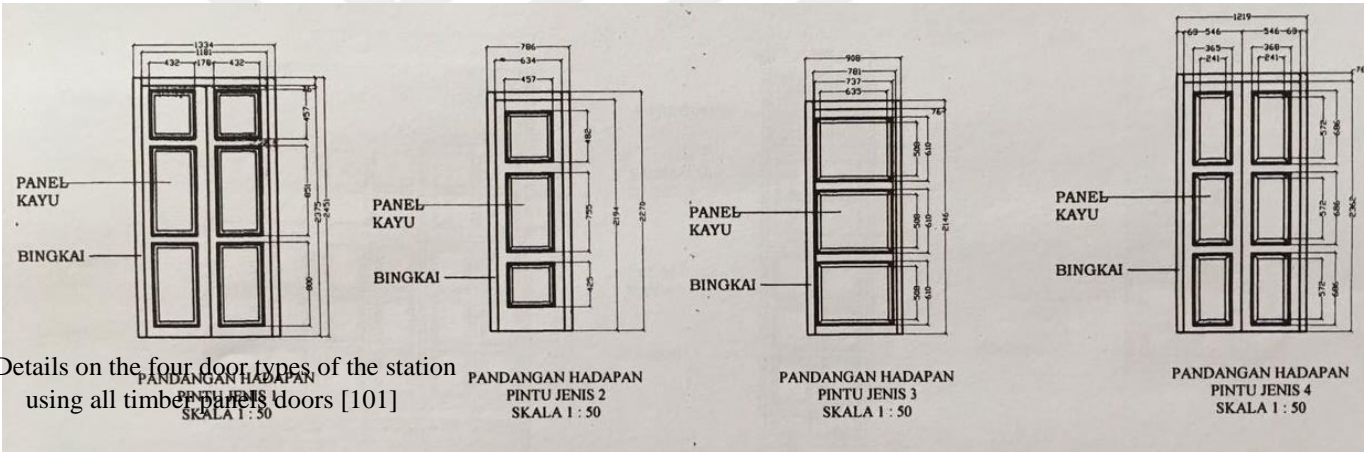
YEAR OPEN: 1922  
YEAR BUILT: -

ARCHITECT: Unknown

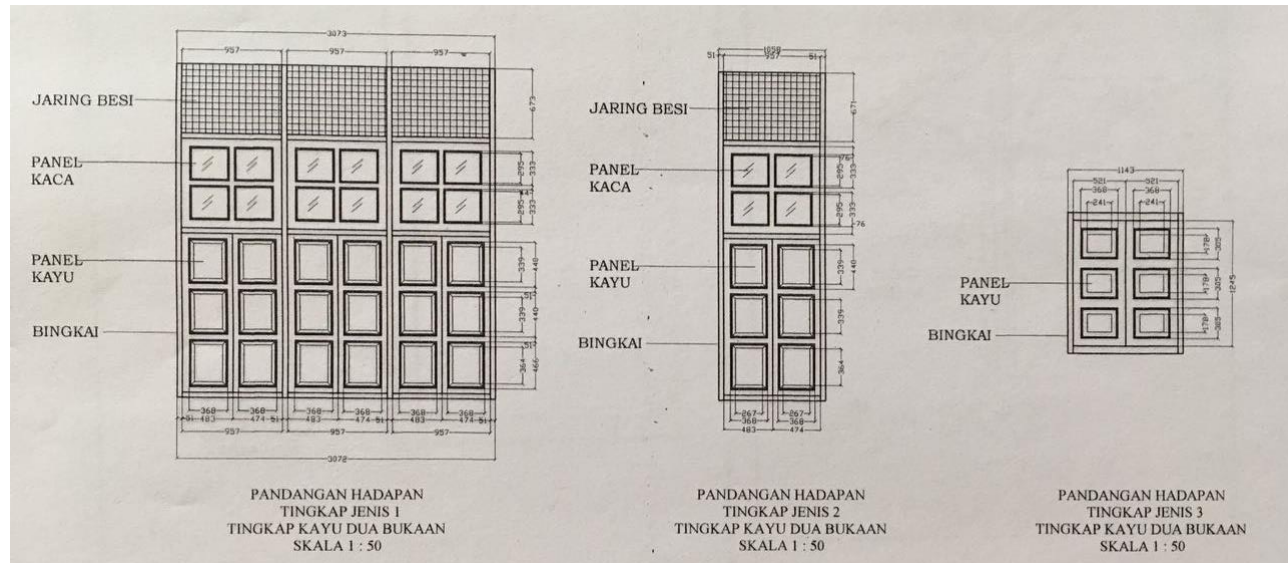
ADDRESS: Gemas Station, Station Road, 73400  
Gemas, Negeri Sembilan.

CAT. NO:  
94.2.4

a



1. Details on the four door types of the station using all timber panels doors [101]





<b>NAME:</b> Gemas	<b>YEAR OPEN:</b> 1922 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Gemas Station, Station Road, 73400 Gemas, Negeri Sembilan.	<b>CAT. NO:</b> 94.2.5
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1. The timber panel window has been changed to timber glass panels windows



2. The entrance portico of the station, the station was closed for operation and at the far end is the new station





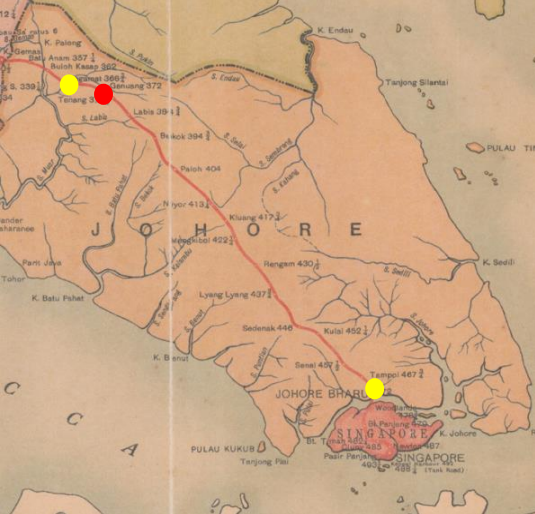

3. Hal of the façade view shows the double panel timber with glass windows, single timber door and the ventilations on the upper window

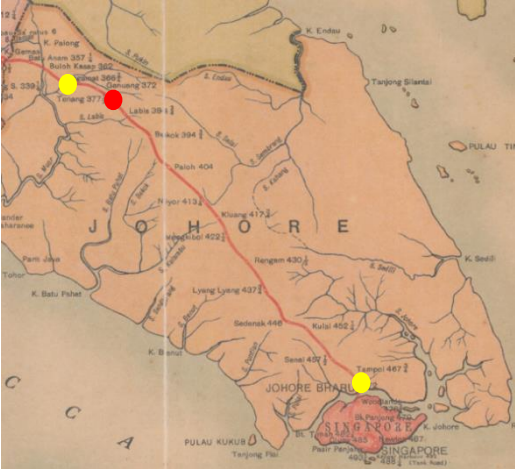


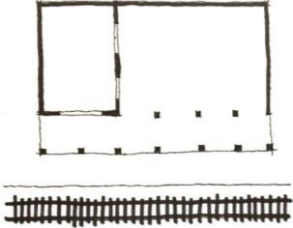


4. The right hand sides of the building are still occupied with the old restaurant



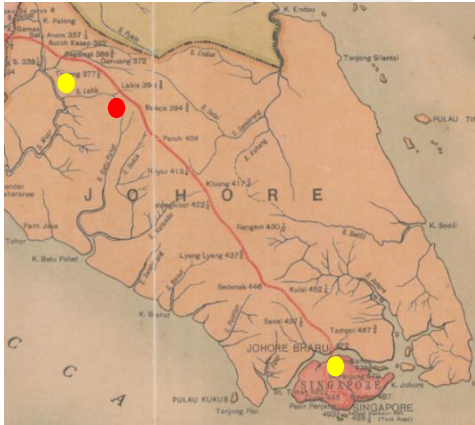
<b>NAME:</b> Gemas	<b>YEAR OPEN:</b> 2014 <b>YEAR BUILT:</b> 2012	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Gemas Station, Station Road, 73400 Gemas, Negeri Sembilan.	<b>CAT. NO:</b> 94.3
 <p>Map 94.3 The location map of Gemas Station, (Google Map, 8<sup>th</sup> January 2015)</p>		<p><b>PHOTOGRAPHS:</b></p>  <p>Image 126 The new Gemas Station located few metres away from the old station</p>		
<p><b>BUILDING INFORMATION:</b></p> <p>The station was rebuilt in 2012 and being electrified in 2014 as part of the Electrified Double Tracking Project on Seremban – Gemas line.</p> <p><b>CURRENT SITUATION:</b> In Operation</p>				

<b>NAME:</b> Genuang	<b>YEAR OPEN:</b> 1.7.1909 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Genuang Station, Segamat District, Johor Bahru.	<b>CAT. NO:</b> 95
 <p>Map 95 The red dot on FMSR Construction Map dated 1919 show Genuang Station (Malaysia National Archives)</p>		<b>PHOTOGRAPHS:</b>  <p>Image 127 Genuang Station [79]</p>		
<b>BUILDING HISTORY:</b>  Genuang Station was opened on 1 <sup>st</sup> July 1909 as part of the Segamat – Johore Bahru (yellow dots in map). The distance from Segamat Station to Johore Bahru Station was 104.49 miles. There were 9 intermediate stations on this line.		<b>PLAN:</b>  No old plans and drawings could be found.	<b>MAIN FAÇADE:</b>  No pictures found.	
<b>CURRENT SITUATION :</b> Closed and Demolished		<b>BUILDING DESCRIPTION:</b>  No description.		

<b>NAME:</b> Tenang	<b>YEAR OPEN:</b> 1.7.1909 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Tenang Station, 85000, Segamat, Johor	<b>CAT. NO:</b> 96
 <p>Map 96 The red dot on FMSR Construction Map dated 1919 show Tenang Station (Malaysia National Archives)</p>		<b>PHOTOGRAPHS:</b>   <p>Image 128 View of the station from the main road</p> <p>Image 129 View towards the ticket office and waiting area</p>		
<b>BUILDING HISTORY:</b> <p>Tenang Station was opened on 1<sup>st</sup> July 1909 as part of the Segamat – Johore Bahru (yellow dots in map). The distance from Segamat Station to Johore Bahru Station was 104.49 miles. There were 9 intermediate stations on this line. Tenang Station was the second station after Genuang Station from Segamat station.</p>		<b>SCHEMATIC PLAN:</b> 	<b>MAIN FAÇADE:</b> <p>No pictures found.</p>	
<b>CURRENT SITUATION:</b> Closed and Preserved.		<b>BUILDING DESCRIPTION:</b> <p>According to the photo shown above, the station only housed a ticketing counter and an office with an open waiting area. The single storey station covered with gable roof and its overhanging roof eaves covered some of its platform.</p>		



<b>NAME:</b> Labis	<b>YEAR OPEN:</b> 1.7.1909 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Labis Station, 85300 Labis, Johor Darul Takzim,	<b>CAT. NO:</b> 97
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Map 97 The red dot on FMSR Construction Map dated 1919 show Labis Station (Malaysia National Archives)  
Image 130 View from the track

**PHOTOGRAPHS:**



Image 131 View towards the ticket office

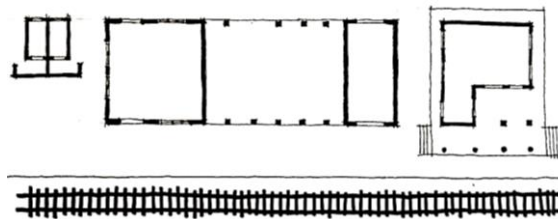


**BUILDING HISTORY:**

Labis Station was opened on 1<sup>st</sup> July 1909 as part of the Segamat – Johore Bahru (yellow dots in map). The distance from Segamat Station to Johore Bahru Station was 104.49 miles. There were 9 intermediate stations on this line. Labis Station was the third station after Tenang station from Segamat Station.

**CURRENT SITUATION:** Still In Operation

**SCHEMATIC PLAN:**



It housed toilet, prayer room, waiting area, ticket counter and office

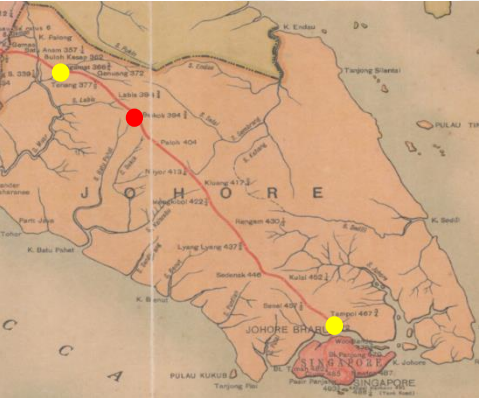


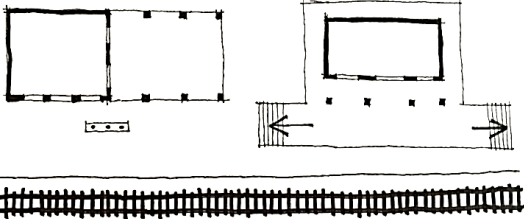

**MAIN FAÇADE:**

No pictures found.

**BUILDING DESCRIPTION:**

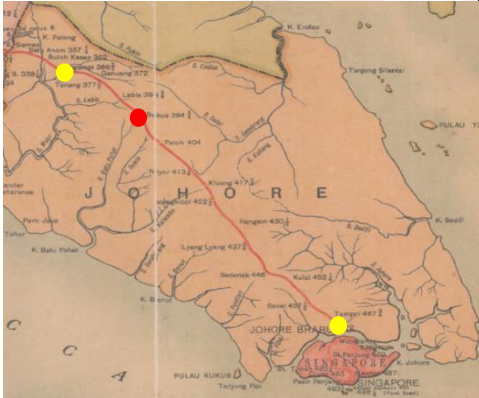
According to the photo shown above, there are two parts of the building, one is rectangular floor plan covered with gable roof and the other one is a raised station building L-shaped in plan covered with hipped roof. The first part of the building was made of timber and the other one is a concrete building. It can be said that the first part of the building might be the old station building as it has open waiting area and a ticketing office (now a prayer room) and it resembles other old small station buildings.



<b>NAME:</b> Bekok	<b>YEAR OPEN:</b> 1.7.1909 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Bekok Station, 85300 Labis, Johor Darul Takzim,	<b>CAT. NO:</b> 98
 <p>Map 98 The red dot on FMSR Construction Map dated 1919 show Bekok Station (Malaysia National Archives)</p>		<b>PHOTOGRAPHS:</b> <div style="display: flex; justify-content: space-around;"> <div>  <p>Image 132 View from the track</p> </div> <div>  <p>Image 133 View towards the ticket office</p> </div> </div>		
<b>BUILDING HISTORY:</b> <p>Bekok Station was opened on 1<sup>st</sup> July 1909 as part of the Segamat – Johore Bahru (yellow dots in map). The distance from Segamat Station to Johore Bahru Station was 104.49 miles. There were 9 intermediate stations on this line. Bekok Station was the fourth station after Labis Station.</p>		<b>SCHEMATIC PLAN:</b>  <p>It housed toilet, prayer room, waiting area, ticket counter and office</p>		<b>MAIN FAÇADE:</b>  <p>Image 134 View from the opposite tracks</p>
<b>CURRENT SITUATION:</b> Still In Operation		<b>BUILDING DESCRIPTION:</b> <p>According to the photo shown above, there are two parts of the building, one is rectangular floor plan covered with gable roof and the other one is a raised station building rectangular in plan covered with hipped roof. The first part of the building was made of timber and the other one is a concrete building. It can be said that the first part of the building might be the old station building as it has open waiting area and a ticketing office and it resembles other old small station buildings.</p>		

<b>NAME:</b> Paloh	<b>YEAR OPEN:</b> 1.7.1909 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Paloh Station, No. 39 Jalan Station, 86600 Paloh, Johor.	<b>CAT. NO:</b> 99
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**PHOTOGRAPHS:**



Map 99 The red dot on FMSR Construction Map dated 1919 show Paloh Station (Malaysia National Archives)



Image 135 View of the station from the track



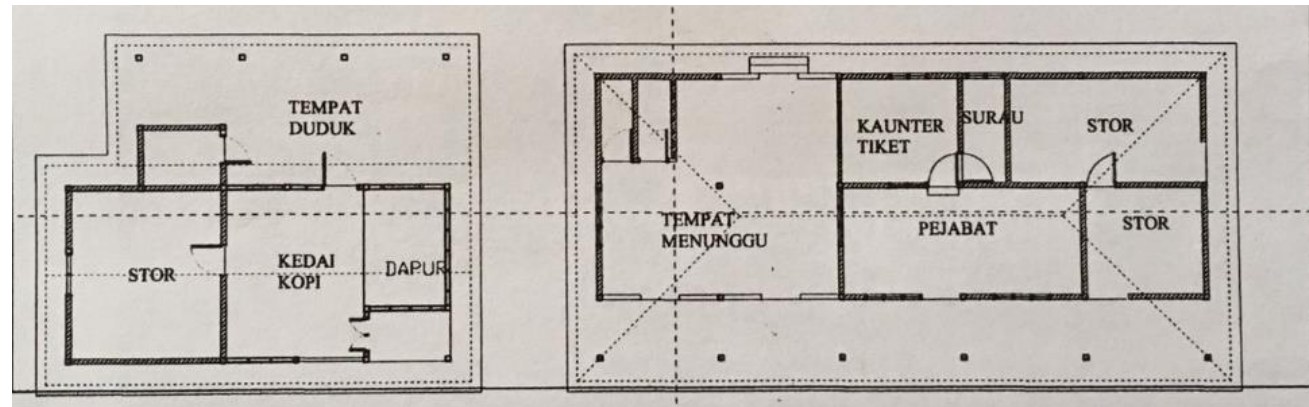
Image 136 Canteen located next to the station

**BUILDING HISTORY:**

Paloh Station was opened on 1<sup>st</sup> July 1909 as part of the Segamat – Johore Bahru (yellow dots in map). The distance from Segamat Station to Johore Bahru Station was 104.49 miles. There were 9 intermediate stations on this line. Paloh Station was the fifth station after Bekok Station.

**CURRENT SITUATION:** Still In Operation

**PLAN:**



Plan of the station shows rectangular shaped plan with open concept of the waiting area and the other building to the left is the stations' canteen (KALAM, 2007-2008)



<b>NAME:</b> Paloh	<b>YEAR OPEN:</b> 1.7.1909 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Paloh Station, No. 39 Jalan Station, 86600 Paloh, Johor.	<b>CAT. NO:</b> 99.1.1
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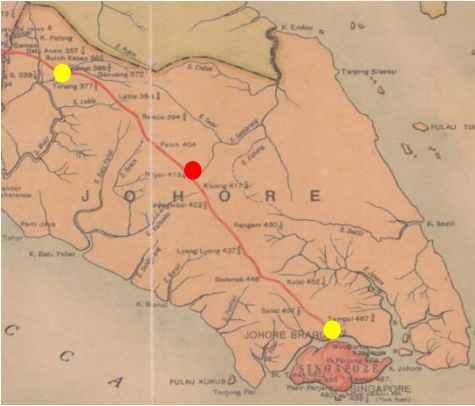


Image 137 View of the entrance and canteen next to the station



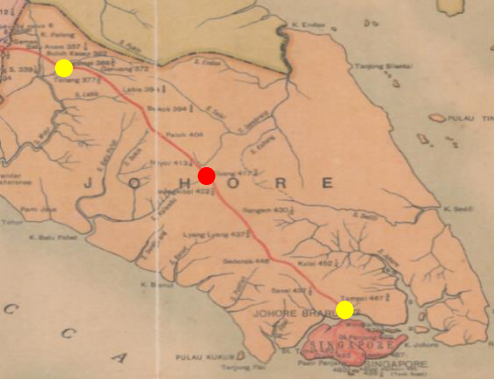

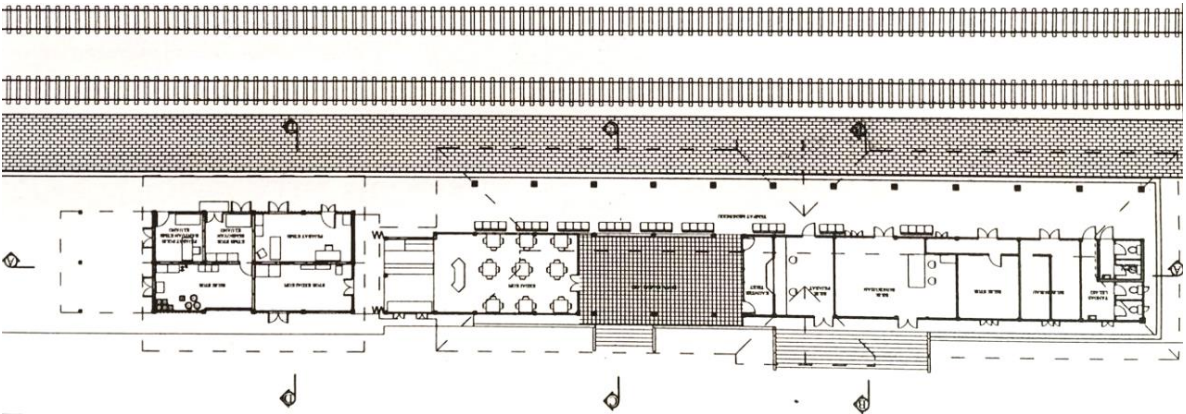
Image 138 View of the waiting area, ticketing office and toilets

**BUILDING DESCRIPTION:**

According to the photo shown above, the station building was rectangular building plan and a bricks station building. The station building has a canteen separated from the main station. The main station was covered with hipped roof while the canteen was covered with gable roof. The waiting area used an open concept.

<b>NAME:</b> Nyior	<b>YEAR OPEN:</b> 1.7.1909 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Nyior Station, Kluang District, Johor Bahru.	<b>CAT. NO:</b> 100
 <p>Map 100 The red dot on FMSR Construction Map dated 1919 show Nyior Station (Malaysia National Archives)</p>		<b>PHOTOGRAPHS:</b>  <p>Image 139 Left abandoned [100]</p>  <p>Image 140 Left abandoned and vandalism all over the station building, [100]</p>		
<b>BUILDING HISTORY:</b> <p>Nyior Station was opened on 1<sup>st</sup> July 1909 as part of the Segamat – Johore Bahru (yellow dots in map). The distance from Segamat Station to Johore Bahru Station was 104.49 miles. There were 9 intermediate stations on this line. Nyior Station was the sixth station after Paloh Station.</p>		<b>PLAN:</b> <p>No plans and drawings were found.</p>	<b>MAIN FAÇADE:</b> <p>No pictures found.</p>	
<b>CURRENT SITUATION:</b> Closed and Demolished		<b>BUILDING DESCRIPTION:</b> <p>According to the photo shown above, the station building was rectangular building plan and a bricks station building. The station was covered with a flat roof.</p>		



<b>NAME: Kluang</b>	<b>YEAR OPEN:</b> <b>1.7.1909</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS:</b> Kluang Station, Jalan Station, 86000 Kluang, Johor.	<b>CAT. NO: 101</b>
 <p>Map 101 The red dot on FMSR Construction Map dated 1919 show Kluang Station (Malaysia National Archives)</p>		<b>PHOTOGRAPHS:</b>  <p>Image 141 View from across the track showing the concrete butterfly train-sheds and the station with blue coloured hip-gabled roof</p>		
<b>BUILDING HISTORY:</b>  Kluang Station was opened on 1 <sup>st</sup> July 1909 as part of the Segamat – Johore Bahru (yellow dots in map). The distance from Segamat Station to Johore Bahru Station was 104.49 miles. There were 9 intermediate stations on this line. Nyior Station was the seventh station after Segamat Station.  <b>CURRENT SITUATION:</b> Still In Operation		<b>PLAN:</b>  <p>The station building can be divided into three parts, the offices and its waiting area, the station's restaurant, and other services parts such as musolla [102]</p>		

**NAME: Kluang**

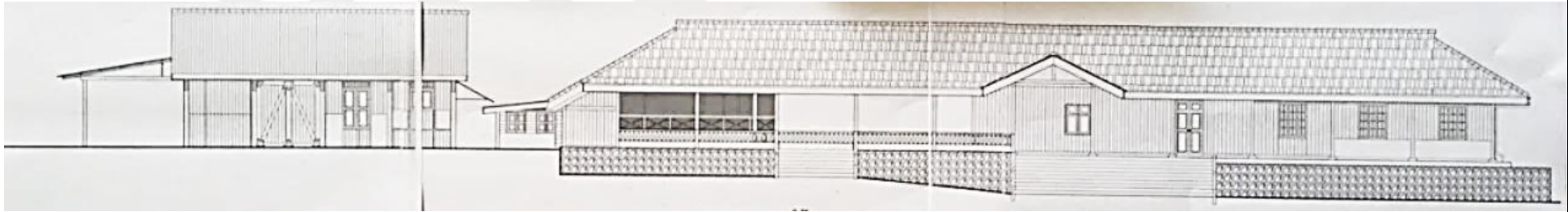
**YEAR OPEN: 1.7.1909**  
**YEAR BUILT: -**

**ARCHITECT: Unknown**

**ADDRESS: Kluang Station, Jalan Station, 86000**  
**Kluang, Johor.**

**CAT. NO: 101.1.1**

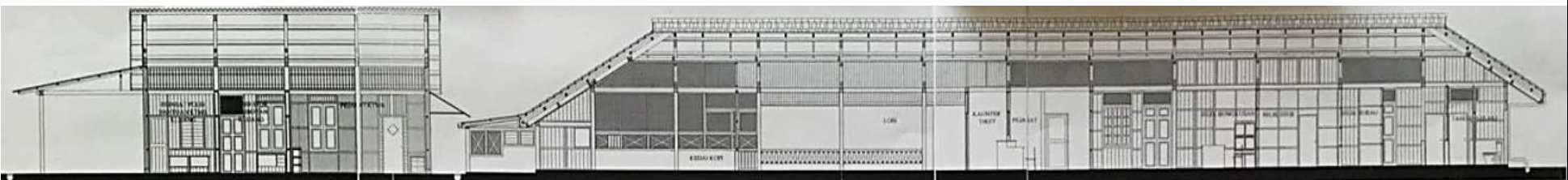
**ELEVATIONS:**



1. Front Elevation shows the overall view of the station from the road with the main building covered with hipped roof intersecting in the middle with gable roof as the entrance and another services building separated from the main station, [102]

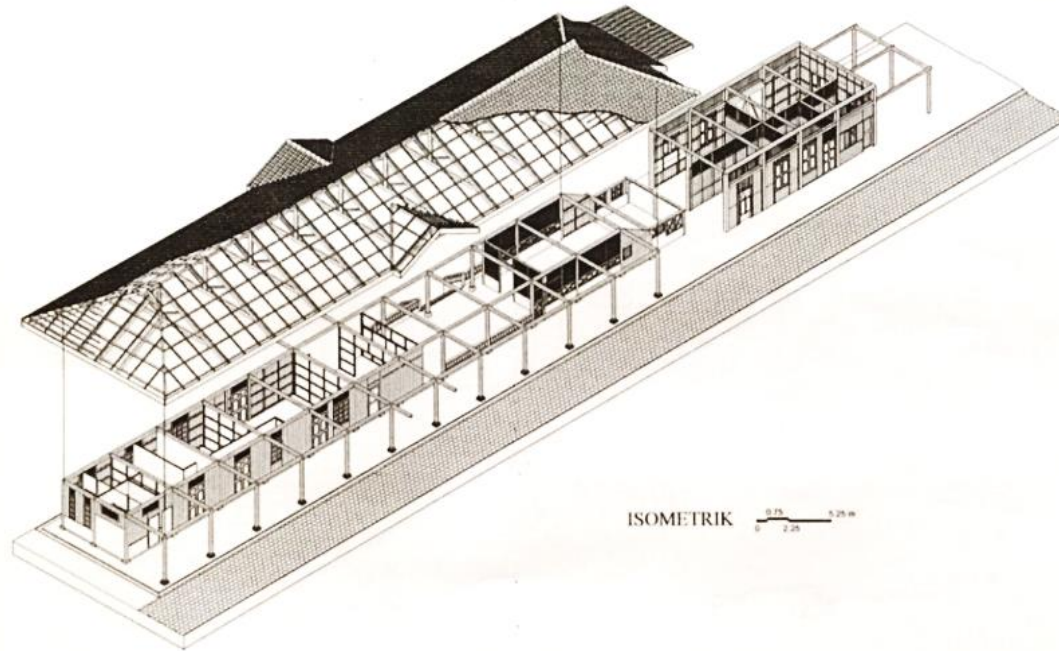


2. Rear Elevation shows the station view from the tracks where the station were made of timber constructions with balustrades at the waiting area, [102]



3. Section A-A shows the whole timber structural system of the station with high ceilings and also they have upper ventilations for doors and windows, [102]

<b>NAME: Kluang</b>	<b>YEAR OPEN: 1.7.1909</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Kluang Station, Jalan Station, 86000</b> <b>Kluang, Johor.</b>	<b>CAT. NO:</b> <b>101.1.2</b>
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Isometric Drawing showing the pop out roofs from its building and the building structural system [102]



<b>NAME:</b> Kluang	<b>YEAR OPEN:</b> 1.7.1909 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Kluang Station, Jalan Station, 86000 Kluang, Johor.	<b>CAT. NO:</b> 101.1.3
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1. The image of the station with new roof being changed with blue metal decking and newly added butterfly train-sheds at the far right

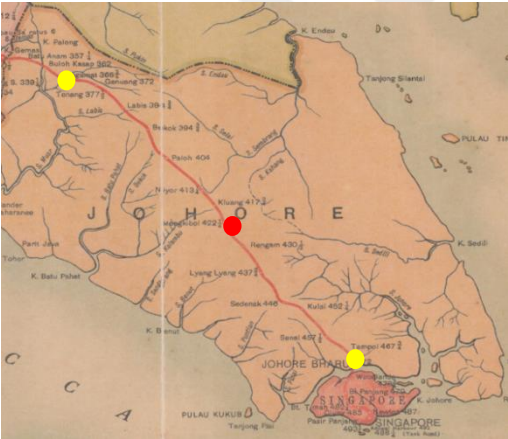



2. The image of the station's restaurant,



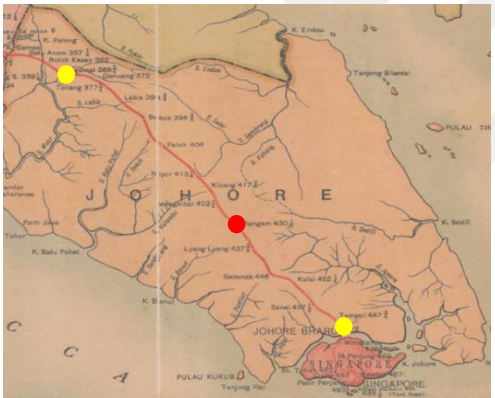
3. The image of two panels' timber door with wire-mesh at the upper door for ventilations



<b>NAME:</b> <b>Mengkibol</b>	<b>YEAR OPEN: 1.7.1909</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS:</b> Mengkibol Station, Kluang District, Johor Bahru.	<b>CAT. NO: 102</b>
 <p>Map 102 The red dot on FMSR Construction Map dated 1919 show Mengkibol Station (Malaysia National Archives)</p>		<b>PHOTOGRAPHS:</b>  <p>Image 142: Mengkibol Station in 2010 [79]</p>		
<b>BUILDING HISTORY:</b>  Mengkibol Station was opened on 1 <sup>st</sup> July 1909 as part of the Segamat – Johore Bahru (yellow dots in map). The distance from Segamat Station to Johore Bahru Station was 104.49 miles. There were 9 intermediate stations on this line. Mengkibol Station was the eighth station after Kluang Station.		<b>PLAN:</b>  No plans and drawings were found.	<b>MAIN FAÇADE:</b>  No pictures found.	
<b>CURRENT SITUATION:</b> Closed and Demolished		<b>BUILDING DESCRIPTION:</b>		

<b>NAME: Rengam</b>	<b>YEAR OPEN: 1.7.1909</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Rengam Station, Johor Bahru.</b>	<b>CAT. NO: 103</b>
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**PHOTOGRAPHS:**



Map 103 The red dot on FMSR Construction Map dated 1919 show Rengam Station (Malaysia National Archives)



Image143: View towards the station buildings



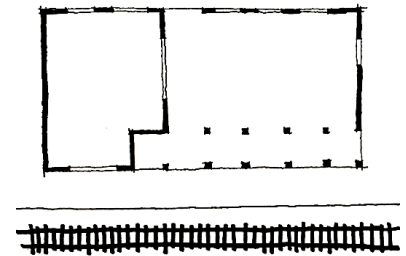
Image 144: View towards the waiting area

**BUILDING HISTORY:**

Rengam Station was opened on 1<sup>st</sup> July 1909 as part of the Segamat – Johore Bahru (yellow dots in map). The distance from Segamat Station to Johore Bahru Station was 104.49 miles. There were 9 intermediate stations on this line. Rengam Station was the ninth station after Mengkibol Station.

**CURRENT SITUATION:** Still In Operation

**SCHEMATIC PLAN:**



Rengam Station includes waiting area, office and ticket counter

**MAIN FAÇADE:**



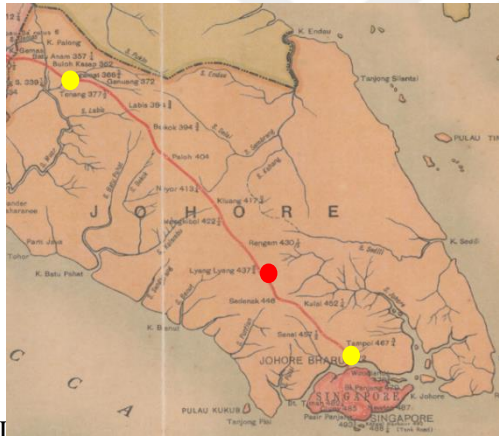
Image 145: View towards the station from the main road

**BUILDING DESCRIPTION:**

According to the photo shown above, this station building was located a bit up on the hilly area. It was rectangular in plan with open sided waiting area towards the platform. It was covered with hip-gabled roof and the station building was made from timber.

<b>NAME:</b> Layang-Layang	<b>YEAR OPEN:</b> 1.7.1909 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Layang-Layang Station, Johor	<b>CAT. NO:</b> 104
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**PHOTOGRAPHS:**



Map 104 The red dot on FMSR Construction Map dated 1919 show Layang-Layang Station (Malaysia National Archives)



Image 147: The administration part of the station



**BUILDING HISTORY:**

Rengam Station was opened on 1<sup>st</sup> July 1909 as part of the Segamat – Johore Bahru (yellow dots in map). The distance from Segamat Station to Johore Bahru Station was 104.49 miles. There were 9 intermediate stations on this line. Rengam Station was the ninth station after Segamat Station.

**CURRENT SITUATION:** Still In Operation

**PLAN:**

No plans and drawings were found.

**MAIN FAÇADE:**

No pictures found.

**BUILDING DESCRIPTION:**

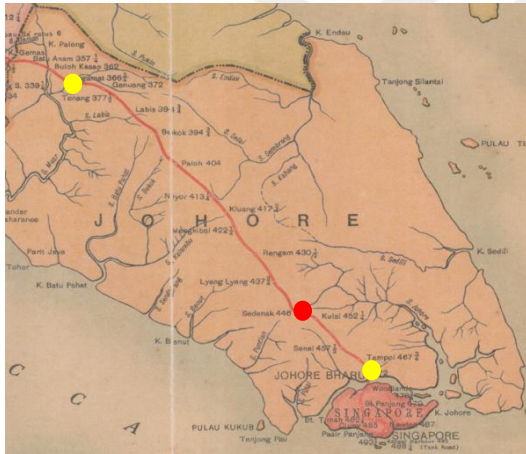
According to the photo shown above, the station building was rectangular in plan. Three glass louvered panel windows and five glass louvered panel windows were used on the side elevation towards the tracks.



<b>NAME:</b> Sedenak	<b>YEAR OPEN:</b> 1.7.1909 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Sedenak Station, Johor	<b>CAT. NO:</b> 105
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**PHOTOGRAPHS:**

No pictures found.



Map 105 The red dot on FMSR Construction Map dated 1919 show Sedenak Station (Malaysia National Archives)

**BUILDING HISTORY:**

Sedenak Station was opened on 1<sup>st</sup> July 1909 as part of the Segamat – Johore Bahru (yellow dots in map). The distance from Segamat Station to Johore Bahru Station was 104.49 miles. There were 9 intermediate stations on this line. Sedenak Station was the ninth station after Layang-Layang Station.

**PLAN:**

No plans and drawings were found.

**MAIN FAÇADE:**

No pictures found.

**CURRENT SITUATION:** Demolished

**BUILDING DESCRIPTION:**

No description.



**NAME:** Kulai

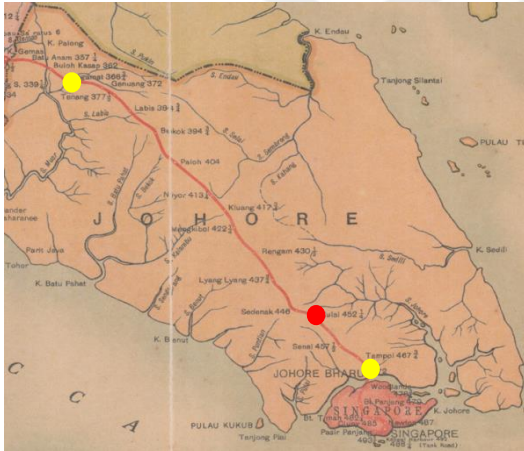
**YEAR OPEN:** 1.7.1909  
**YEAR BUILT:** -

**ARCHITECT:** Unknown

**ADDRESS:** Kulai Station, Jalan Raya, 81000  
Kulai, Johor Darul Takzim.

**CAT. NO:** 106

**PHOTOGRAPHS:**



Map 106 The red dot on FMSR Construction Map dated 1919 show Kulai Station (Malaysia National Archives)



Image 148: The entrance as a waiting area



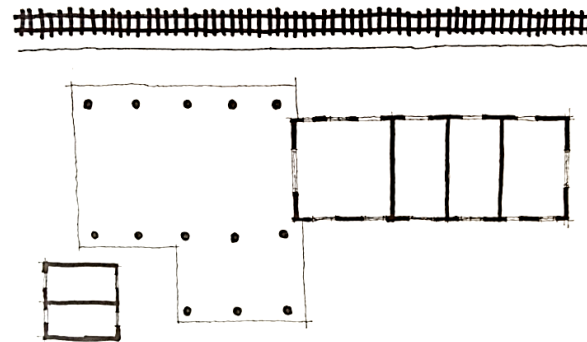
Image 149: The view of the station from the tracks

**BUILDING HISTORY:**

Kulai Station was opened on 1<sup>st</sup> July 1909 as part of the Segamat – Johore Bahru (yellow dots in map). The distance from Segamat Station to Johore Bahru Station was 104.49 miles. There were 9 intermediate stations on this line.

**CURRENT SITUATION:** Still In Operation

**SCHEMATIC PLAN:**



Kulai Station includes toilets, opened air waiting area, ticket counter and offices

<b>NAME:</b> Kulai	<b>YEAR OPEN:</b> 1.7.1909 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Kulai Station, Jalan Raya, 81000 Kulai, Johor Darul Takzim.	<b>CAT. NO:</b> 106.1.1
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1. The image of the timber station building and two railway tracks



2. View of the station entrance from the road



3. The two panelled timber windows with louvered on the top half,

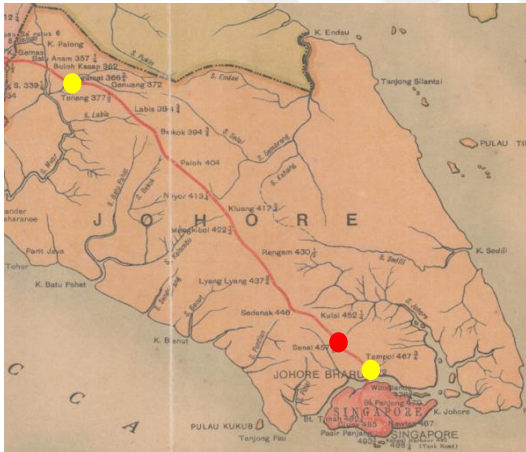
4. The image showing the open concept of waiting area

**BUILDING DESCRIPTION:**

According to the photos shown above, the station building was L-shaped in plan and it used gable roof on its main administration office and hipped roof on the waiting area side. It also has small separate toilets from the building. Two different design of windows used; double timber panels and also double timber louvered panels. Circular columns are used at the waiting area.

<b>NAME:</b> Senai	<b>YEAR OPEN:</b> 1.7.1909 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Senai Station, Johor	<b>CAT. NO:</b> 107
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**PHOTOGRAPHS:**



Map 107 The red dot on FMSR Construction Map dated 1919 show Senai Station (Malaysia National Archives)



Image 150: View from the top of the station [76]

**BUILDING HISTORY:**

Senai Station was opened on 1<sup>st</sup> July 1909 as part of the Segamat – Johore Bahru (yellow dots in map). The distance from Segamat Station to Johore Bahru Station was 104.49 miles. There were 9 intermediate stations on this line.

**CURRENT SITUATION:** Closed and Demolished

**PLAN:**

No plans and drawings were found.

**MAIN FAÇADE:**

No pictures found.

**BUILDING DESCRIPTION:**

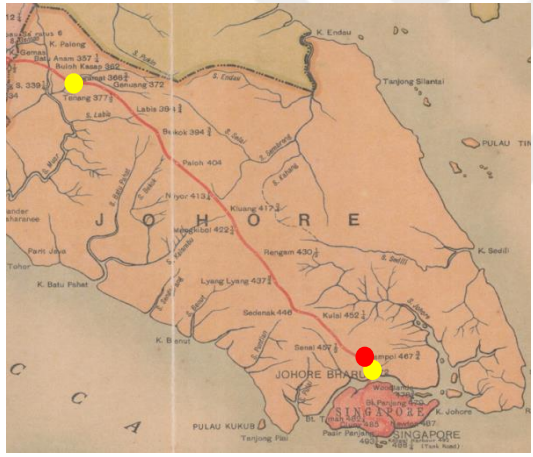
According to the photo shown above, it can be seen that it was a single storey concrete building covered with hipped roof. There might be only office and ticketing area and big open waiting area.



<b>NAME:</b> Tampoi	<b>YEAR OPEN:</b> 1.7.1909 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Tampoi Station, Johor	<b>CAT. NO:</b> 108
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**PHOTOGRAPHS:**

No pictures found.



Map 108 The red dot on FMSR Construction Map dated 1919 show Tampoi Station (Malaysia National Archives)

**BUILDING HISTORY:**

Tampoi Station was opened on 1<sup>st</sup> July 1909 as part of the Segamat – Johore Bahru (yellow dots in map). The distance from Segamat Station to Johore Bahru Station was 104.49 miles. There were 9 intermediate stations on this line.

**CURRENT SITUATION:** Demolished

**PLAN:**

No plans and drawings were found.

**MAIN FAÇADE:**

No pictures found.

**BUILDING DESCRIPTION:**

No description.



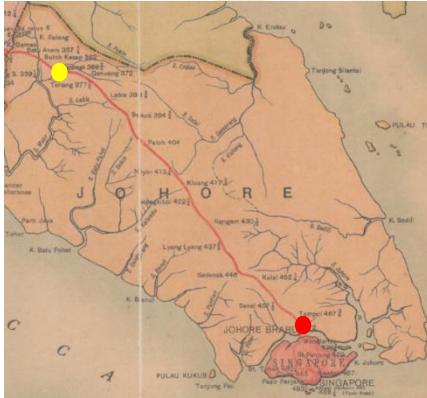
**NAME: Johor Bahru**

**YEAR OPEN: 1909**  
**YEAR BUILT: -**

**ARCHITECT: Unknown**

**ADDRESS: Johore Bahru Station, Johor Bahru**

**CAT. NO:109.1**



Map 109.1 The red dot on FMSR Construction Map dated 1919 show Johore Bahru Station (Malaysia National Archives)

**PHOTOGRAPHS:**



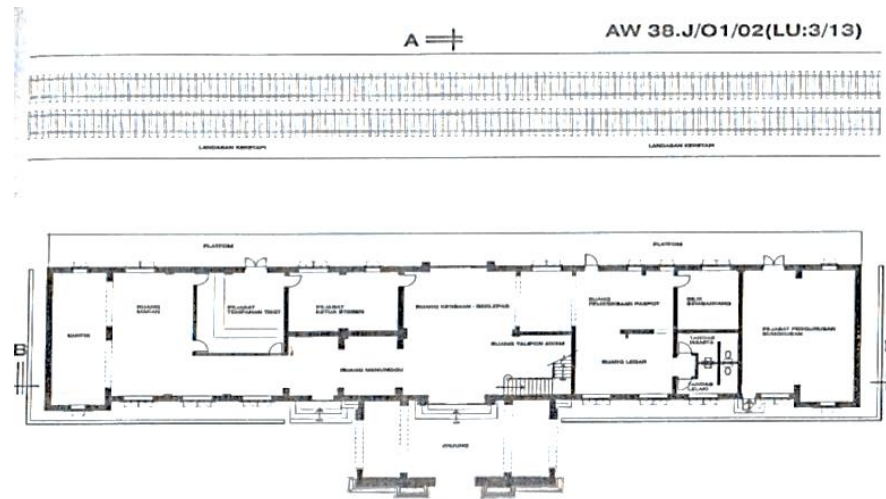
Image 151: The old Johore Bahru Station circa 1900s was shorter than the new one built in 1931 [5]

**BUILDING HISTORY:**

Johor Bahru Station (red dot in map) was opened on 1<sup>st</sup> July 1909 as part of the Segamat – Johore Bahru. The distance from Segamat Station to Johore Bahru Station was 104.49 miles. There were 9 intermediate stations on this line.

**CURRENT SITUATION:** Closed and renovation been made for new station.

**PLAN:**



Ground Floor Plan shows rectangular shaped-plan with projecting portico and two railway tracks [103]

**NAME: Johor Bahru**

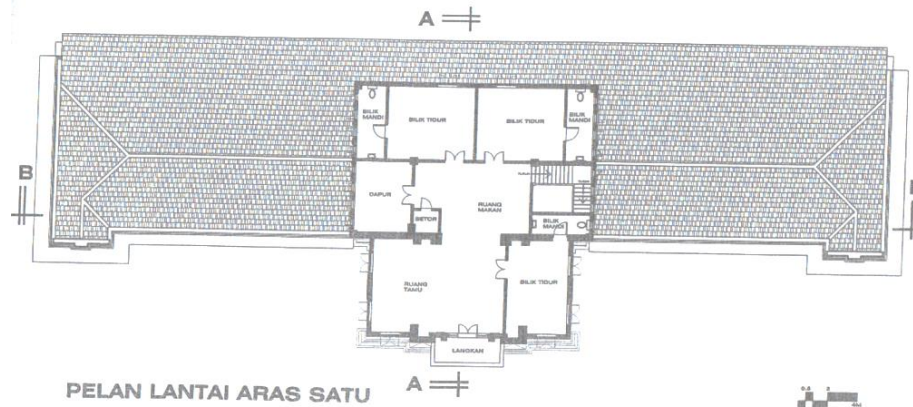
**YEAR OPEN: 1909**  
**YEAR BUILT: -**

**ARCHITECT: Unknown**

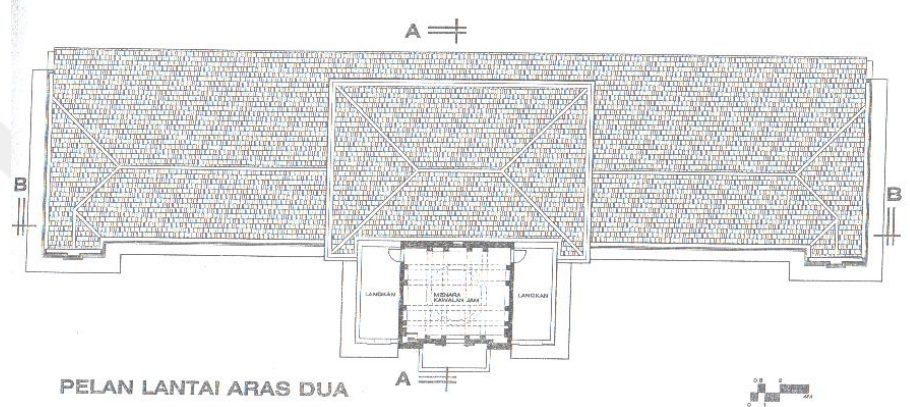
**ADDRESS: Johore Bahru Station, Johor Bahru**

**CAT. NO: 109.1.1**

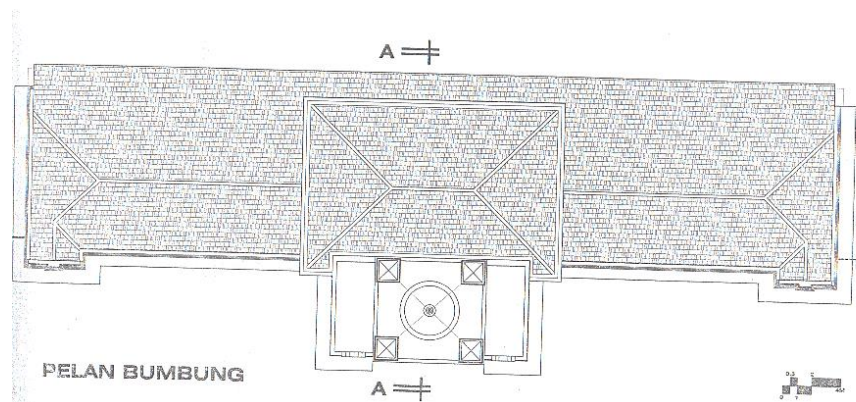
**PLANS:**



1. First Floor Plan shows accommodations with three bedrooms with toilets, a dining room, a living room and a kitchen [103]



2. Second Floor Plan shows the balconies and its clock tower, [103]



3. Roof Plan shows the integration of hipped roof forming a U-shaped plan [103]

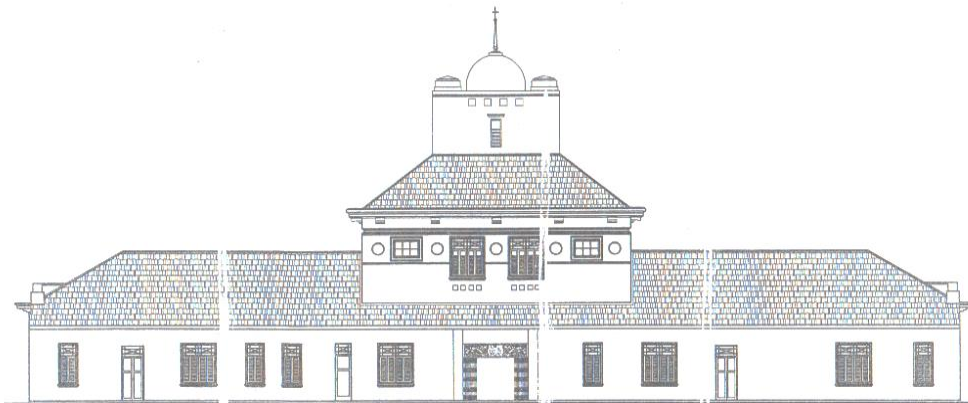
<b>NAME:</b> Johor Bahru	<b>YEAR OPEN:</b> 1931 <b>YEAR BUILT:</b> 1928	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Johore Bahru Station, Johor Bahru	<b>CAT. NO:</b> 109.1.2
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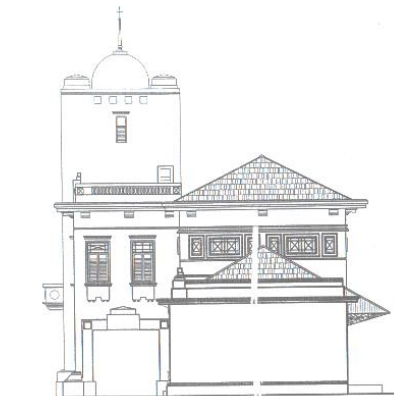
1. Front Elevation showing a symmetrical façade of the station building and the clock tower, [103]



2. The photograph shows the clock no longer in its position



3. Rear Elevation shows a rhythm of windows and doors from the tracks [103]



4. Side Elevation [103]



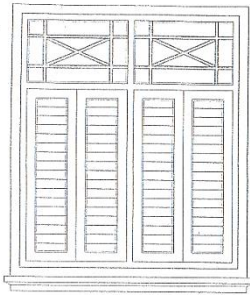
**NAME:** Johor Bahru

**YEAR OPEN:** 1931  
**YEAR BUILT:** 1928

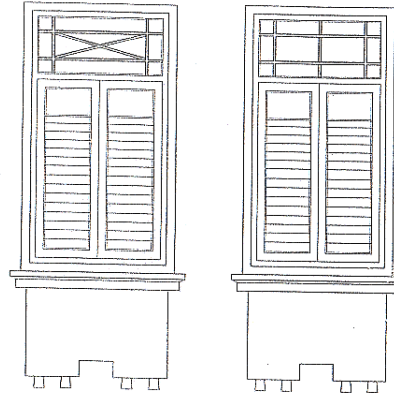
**ARCHITECT:** Unknown

**ADDRESS:** Johore Bahru Station, Johor Bahru

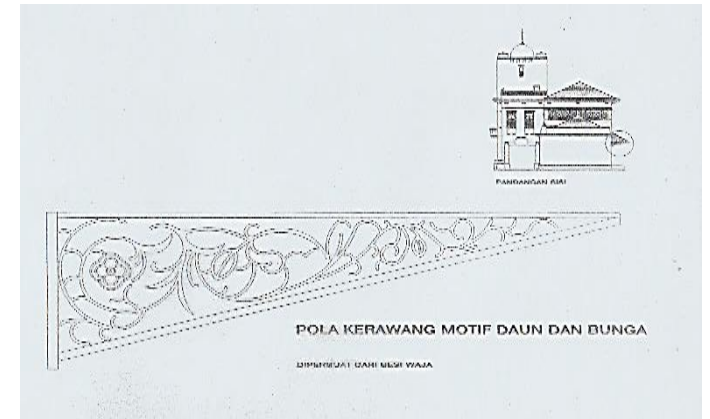
**CAT. NO:** 109.1.3



1. Window panels located on Ground Floor [103]



2. Window panels located on First Floor, [103]



3. Decorative metal panels, [103]



4. The whole window panels as upper image have been changed to glass



5. The same window panels as upper image but the window panels on louvered parts have been changed to glass



6. Parapet roofs in blue surrounding the building



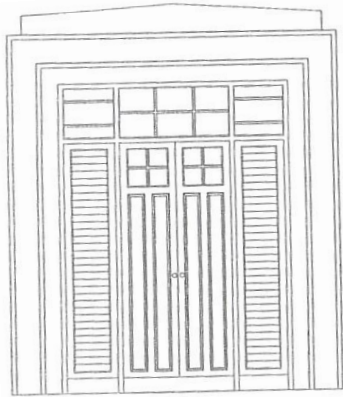
**NAME: Johor Bahru**

**YEAR OPEN: 1931  
YEAR BUILT: 1928**

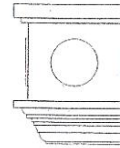
**ARCHITECT: Unknown**

**ADDRESS: Johore Bahru Station, Johor Bahru**

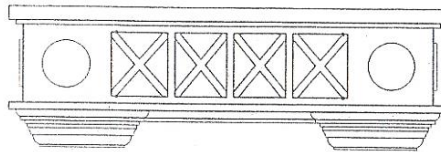
**CAT. NO:  
109.1.4**



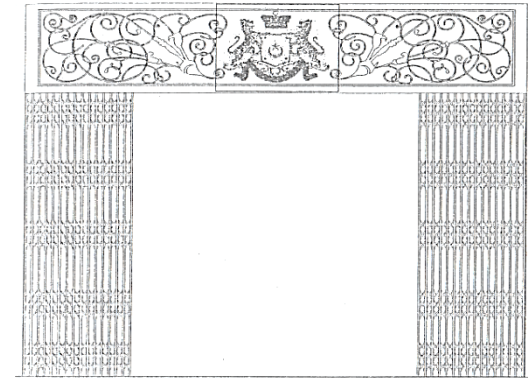
1. Entrance wooden door panels at the balcony, [103]



PANDANGAN SISI



2. Balustrades located on First Floor, [103]



3. Entrance doors' steel grills, [103]



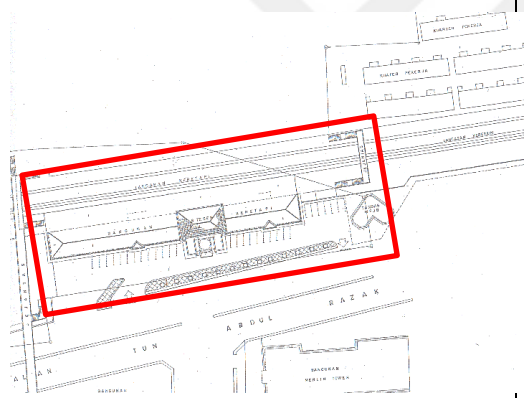
4. The panels still remains but whole timber door has been changed to timber mixed with glass panel doors



5. No more steel grills, only left with new glass doors

<b>NAME: Johor Bahru</b>	<b>YEAR OPEN: 1931 YEAR BUILT: 1928</b>	<b>ARCHITECT: Swan &amp; Mac Laren company</b>	<b>ADDRESS: Johore Bahru Station, Johor Bahru</b>	<b>CAT. NO: 109.2</b>
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**PHOTOGRAPHS:**



Map 109.2 Location map of the Johor Bahru Station [103]

**BUILDING INFORMATION;**

This station is the same old station but it was remodeled. The remodeling of the station constructions started in 1928 and completed in 1931. The remodeling of the station was made by extending both sides making it longer than the old station. The architect from the Swan & Mac Laren Company.

**CURRENT SITUATION:** Closed and restored. Currently in process to turn it into Museum KTM.

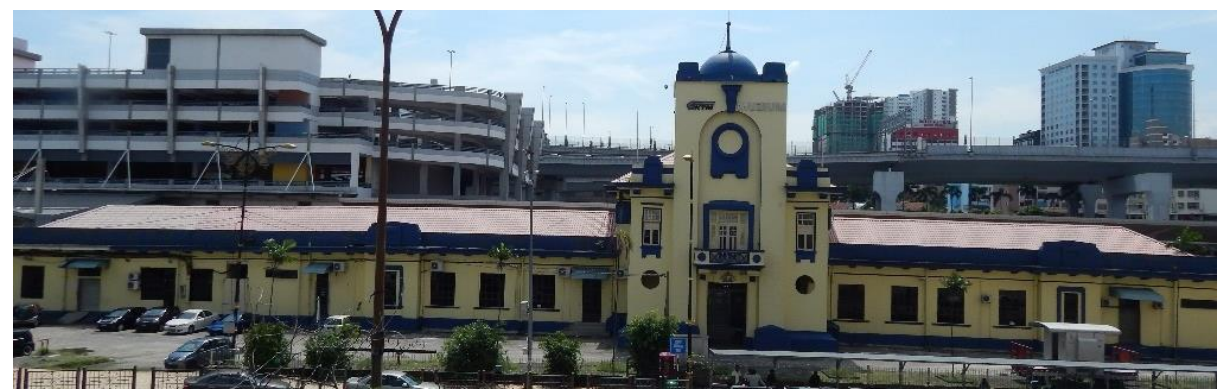
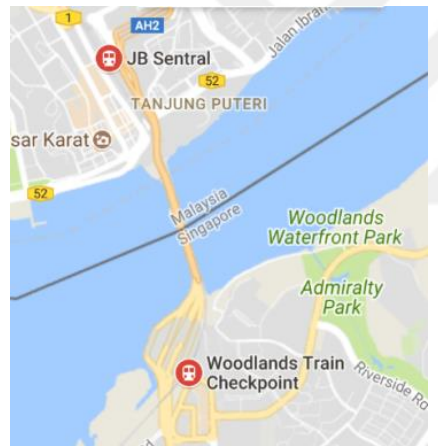


Image 152: The station have been renovated from the previous one as in extension on both sides making it longer

<b>NAME: CIQ Johore Bahru</b>	<b>YEAR OPEN: 2014 YEAR BUILT: 2012</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Johore Bahru Station, Johor Bahru</b>	<b>CAT. NO: 109.3</b>
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**PHOTOGRAPHS:**



Map 109.3 The Google map shows JB Sentral Station (Google Map retrieved on 8 January 2015)

**BUILDING INFORMATION;**

The station was opened on December 2008 which incorporating the main railway station, the central bus hub, customs, immigration and quarantine complex.

**CURRENT SITUATION:** In Operation



Image 153: The new station called CIQ Johore Bahru

<b>NAME: Salak South Junction</b>	<b>YEAR OPEN: 1.9.1913</b> <b>YEAR BUILT: -</b>	<b>ARCHITECT: Unknown</b>	<b>ADDRESS: Salak South Junction Station, Selangor.</b>	<b>CAT. NO: 110</b>
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Map 110 The red dot on FMSR Construction Map dated 1915 show Salak South Junction Station (British National Archives)

<p><b>PHOTOGRAPHS:</b></p> <p style="text-align: center;">No pictures found.</p>
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**BUILDING HISTORY;**

Salak South Junction Station (red dot in map) was opened on 1<sup>st</sup> September 1913. The distance from Port Swettenham Junction Station to Salak South Junction was 5.46 miles.

**PLAN:**

No plans and drawings were found.

**MAIN FAÇADE:**


No pictures found.

**CURRENT SITUATION:** Line Closed and Demolished

**BUILDING DESCRIPTION:**

No description.



<b>NAME:</b> Ampang Junction	<b>YEAR OPEN:</b> 1.5.1914 <b>YEAR BUILT:</b> -	<b>ARCHITECT:</b> Unknown	<b>ADDRESS:</b> Ampang Junction Station, Selangor.	<b>CAT. NO:</b> 111
 <p>Map 111 The red dot on FMSR Construction Map dated 1915 show Ampang Junction Station (British National Archives)</p>		<b>PHOTOGRAPHS:</b>  <p>No pictures found.</p>		
<b>BUILDING HISTORY;</b>  <p>Ampang Junction Station (red dot in map) was opened on 1<sup>st</sup> May 1914. The distance from Ampang Station to Ampang Junction was 3.65 miles.</p>		<b>PLAN:</b>  <p>No plans and drawings were found.</p>	<b>MAIN FAÇADE:</b>  <p>No pictures found.</p>	
<b>CURRENT SITUATION:</b> Line Closed and Demolished		<b>BUILDING DESCRIPTION:</b>  <p>No description.</p>		



### **3.3 DEVELOPMENT PHASE 3 (1948 – 1957).**

The Federation of Malaya, 1<sup>st</sup> February 1948 led to the rebranding of the Federated Malay States Railways to Malayan Railway Administration (MRA) or known as Malayan Railway when it happened by merging all the eleven states which includes nine Malay States and two British Straits Settlements; Penang and Malacca.

There were no new railways line being newly laid as after the end of the war, mostly the work is regarding repairing, reassembling, renovating and refurbishing in order to make good and improved the bad conditions during the Japanese occupation. On the year 1949, the Station Hotels were improved by the adoption of air-conditioning for the smaller rooms in the hotels at Kuala Lumpur and Singapore. The total accommodation of the Singapore hotel was increased to 13 double and 8 single rooms. While the Station Hotel Kuala Lumpur has 34 double and 6 single rooms of which 23 double and 4 single rooms while The Station Hotel at Ipoh has 18 double and 6 single rooms (MRA Reports of the year 1949).

However, on the year 1952, 3 station buildings and quarters and new good shed were set on fire by terrorists and it was completely damaged (MRA Reports of the year 1952). Padang Besar, Kuala Kubu Road and Mentakab Stations were reconstructed in 1957. At the end of the year 1957; there were 175 stations, 11 non-block stations, 69 halts and 20 signal cabin on both, West Coast and East Coast line (MRA Reports of the year 1956).

### RESULTS AND DISCUSSION

This chapter discusses the plan types and architectural styles particularly dealing with the main front façade elements of the West Coastline station buildings. Issues on political, economic and social effects are further discussed as it affects the architectural style selections made by the British Malaya government officers on the formation of these station buildings. Similarities and differences between the architectural styles of the railway station buildings and the examples that can be found from around the world or neighboring countries will be discussed and deliberated.

The birth of the industrial revolution in Great Britain during the 18<sup>th</sup> century gave a big impact across the globe. The inventions, innovations and the technologies provided the British nation the means to expand their reach not only throughout their own country, but to different countries they had colonized as well. This brought Britain to be of great wealth and power. As a result, in the year, 1786, marked the arrival of British in Malaya during the opening of Penang as a free entreport. The coming of British since then have seen to influence the various public buildings and urban settlements in Malaya.

One of the defining and most lasting features of the Industrial Revolution was the rise in the increase of cities. People who lived in rural areas moved from the countryside to small towns



or cities. Modernization was then imposed by the British in Malaya as they have the need to acquire and retrieve the abundant natural resources efficiently. Subsequently the British brought in their experts in relevant sectors and imported then labourers from China and India. With all these factors combined, they played a vital role in the development of Malaya modern architecture of which railroad station buildings were a symbol of modern times and needs.

Railway lines and stations also had contributed to the growth new urban morphology. Most station buildings were located at the centre of the towns which much influenced new urban patterns and forms. Most civic buildings were slowly established around this area. Soon the commercial area consisting of shophouses were built around here.

The British exploited Malaya predominantly in tin mining which have led them to be the major producer and exporter of tin to the world market at the end of the 19<sup>th</sup> century [29]. The first railway line of Taiping – Port Weld was directly associated with this incident. The opening up of the land helped to contribute greatly to the building boom of the late 19<sup>th</sup> and early 20<sup>th</sup> century. New public buildings being introduced into the Malay world includes railway station buildings as a new building type in Malaya.

The new railway stations established a new melting pot giving opportunities for people of various ethnic origins to work together in trading etc. The Malays from rural areas also brought their agricultural products here. The transportation of goods also happens at this point. The Chinese who mostly worked in tin mining industry and largely were involved in trading activities, had the advantage of working together with local people. Such relationships established an environment of tolerance and harmony.

#### **4.1 BUILDING TYPOLOGY**

In the 1840s', the overgrowing tin industry initiated the need for infrastructure development in land transportation mainly railroads, as well as the need for new buildings. The birth of the railroad system in Malaya resulted from the urge to transport iron ore to the ports hence to distribute to other countries mainly Europe and North America [27]. Similarly, transportation of iron from the mine resulted to the birth of the first railroad in 1825 starting from Stockton and ending in Darlington [109], thus the introduction of toll house which later became station building.

The migration of Chinese for tin mining, Indians for railroad constructions and the European bringing foreign capital and technology mainly for the production of tin industry, not only increased the population of the Malay states but also changed the demographic pattern, and the urban settlement' and cities' characteristics. Railroad network helped open up remote mining areas and settlements of the Malay Peninsula, especially the coastal towns along the west coastline of the Peninsula.

How big or small the building is, based on its necessities when it was first built. It is most certain that station buildings developed parallel to the railroad tracks, hence most of the West Coastline station buildings were built according to its sites and were rectangular in shaped. The size of the station building was under the effect of various factors such as town hierarchy, trading activities, volume of commuters, local population etc.

Meanwhile, as mentioned in Chapter 1, Cesar Daly claimed that there were only four station building types. Nevertheless, Malaysian station buildings' plan types can be categorized into

two main types. Firstly, one – sided plan divided into two types, one having a single platform and the other with two platforms and secondly, the head house plan.

Rapid transportation also contributed the deliveries and distributions of new and various products including new building materials and technologies needed for the building industry. Hence, as the technology spreaded, and the passenger volume increases, the train sheds were introducing to provide additional comfort to passengers and provide additional spaces for the storage of goods. The earliest train-sheds<sup>21</sup> were introduced as the new element of the railway system in 1830. It was made of wooden trusses but they easily deteriorated from the exposure to the sulphurous steam of the train [3]. Later, the combination of iron and glassed roof were used to cover enormous areas to include the platforms together with the railway lines. This type has been used extensively all around the world. In the west coastline of Malay peninsula, large train-sheds were introduced in few terminals with large monumental station buildings.

## **PLAN TYPES**

### **One-sided**

It can be stated that most of the station buildings along the West Coast are of one-sided plan type having a single active platform. This plan provides one active platform serving both departing and arriving passengers. This building type, normally complies with small station buildings in relatively small towns. The major problems occurred when the passenger volume grew bigger which resulted in congested and packed platforms.

---

<sup>21</sup> Train-shed is a shelter covering the railway tracks and their adjoining platforms.

Eleven out of eighteen stations fall into this category, Klang (Cat.No.8.2), Tapah Road (Cat.No.22.1), Tenang (Cat.No.96), Labis (Cat.No.97), Bekok (Cat.No.98), Paloh (Cat.No.99), Rengam (Cat.No.103), Kulai (Cat.No.106), Sungai Petani (Cat.No.117.1), Alor Star (Cat.No.126.1) and Chamek (Cat.No.134). All of these buildings were built with basic rectangular floor plans, some with projecting roofs extending over the platform.

This type is basically seen all over the world. This basic plan of long rectangular buildings extending along the rail track, were built to fulfill the basic function that is to discharge goods and passengers quickly as possible when the train stopped. At the same time the covered verandah gives the needed protection for the boarding passengers.

This building type, can be seen in other British Colonies, such as India etc. Some examples were the Crown Street, 1830 (Figure 2.11) in Liverpool and the last one-sided plan type station building in Britain, was at Newcastle Station (Figure 4.1) built in 1855, St. Petersburg (1837) in Russia (demolished in 1849), [3].

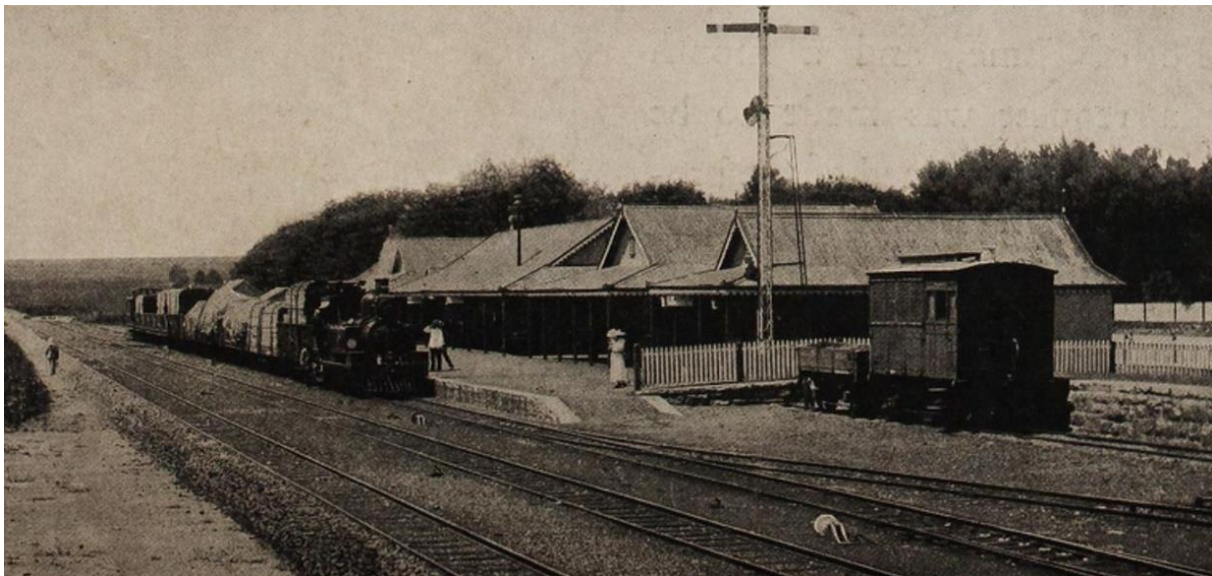


Figure 4.1 1900 photographed of the one-sided station plan type of Newcastle Railway Station shows only one active platform for passengers used [110]



In the early constructions of the Hicaz Railways in the Ottoman world, it can be seen that the Mekece station, 1898 (Figure 4.2) in Sakarya, Turkey also used the one – sided plan type. The Mekece as seen in the photograph shows there was only a single raised platform that was attached to the building.



Figure 4.2 The one–sided station plan type of Mekece train station by the river of Sakarya shows only one active platform for passengers [111]

There are 7 station buildings which are categorized as the one–sided type with two active platforms. For the one–sided type with two active platforms, mostly pedestrian bridges or underground tunnels are provided to allow departing and arriving passengers to get to their respective platforms. The station buildings, mostly incorporating rectangular plan, examples are Taiping (Cat.No.1.2), Gemas (Cat.No.94.2), Kluang (Cat.No.101), old Kuala Lumpur (Cat.No.5.2), Kuala Lumpur (Cat.No.5.3), Ipoh (Cat.No.25.2) and Johor Bharu (Cat.No.109.2). As these stations are not the terminating stations, pedestrian bridges were added to connect the two platforms.

Only two stations, Kuala Lumpur (Cat. No. 5.3) and the Ipoh (Cat. No. 25.2) station buildings provide underground tunnels to discharge passengers outside or to another platform.

Meanwhile there is no information provided about the old Kuala Lumpur station as it was demolished after the new Kuala Lumpur station building was built.

### **Head house type**

The head house plan type, allows both arriving and departing passengers to pass through each other. Both shared a common waiting hall or lounge in a single building having separated platforms for arrival and departure. The U-shaped station is one of the best examples of the head house type station building where it offers easy access and allows passengers to move freely without crossing the tracks.

Tanjong Pagar Station (Cat. No.135) is the only one that has been categorized as the head type station having a U-shaped plan. This might be inspired from the first head type station, the York Station (Figure 4.3), in York, United Kingdom built in 1840-1841 which also employed U-shaped station plan and became one of the most successful and functional station building in the world. The Chhatrapati Shivaji Terminus (formerly Victoria Terminus), India also applied head house plan type but the head house located at the side of the platforms (Figure 4.4). Meanwhile, the St Pancras Station (Figure 4.5) in London, United Kingdom, built in 1868, enveloped the departure and arrival platforms, had close similarities to Tanjong Pagar Station plan, (Cat. No. 135.1.3 – No.1).

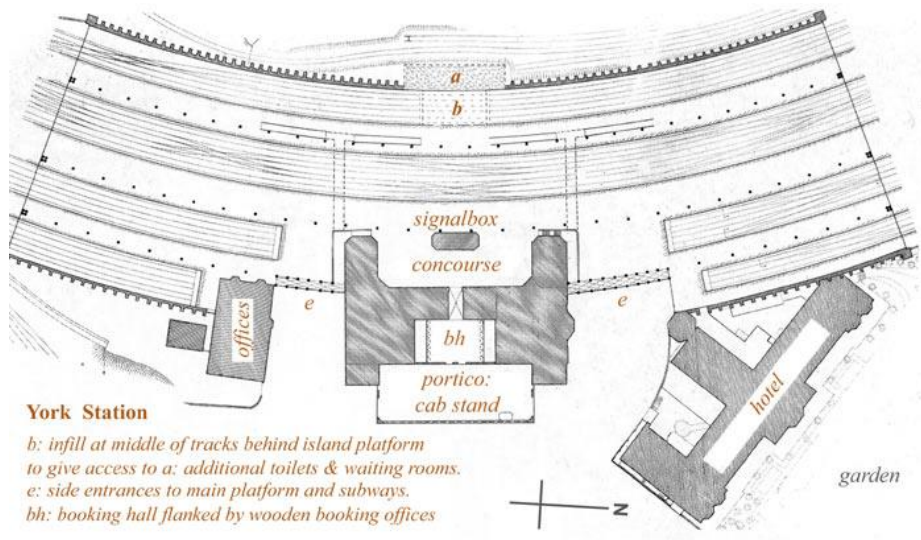


Figure 4.3 The U-shaped plan of the station building located in between offices and the station's hotel [112]

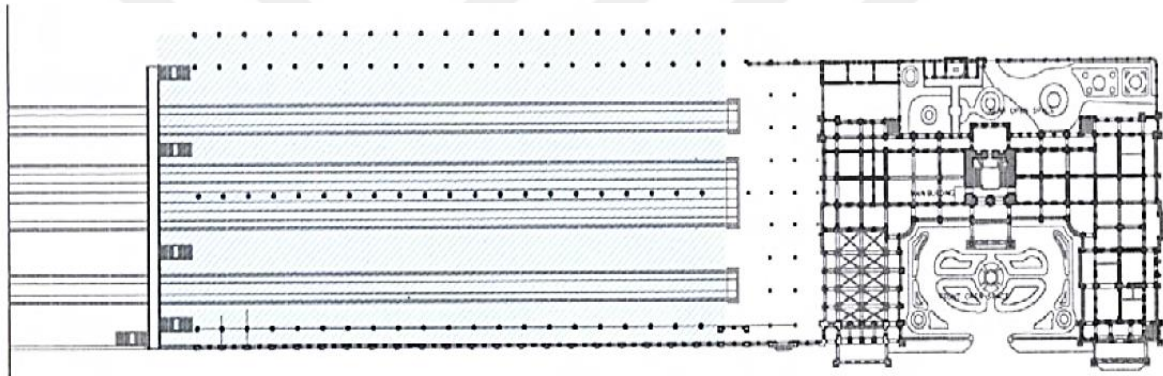


Figure 4.4 The head house type station of the Chhatrapati Shivaji Terminus, India shows railway tracks and platforms located besides the station building [40]

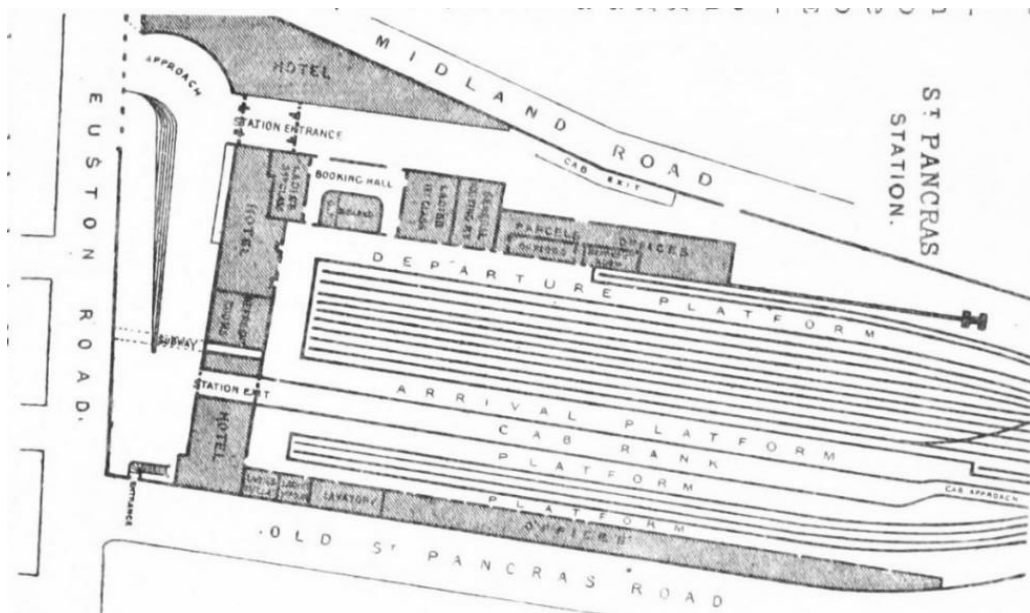


Figure 4.5 The head house plan type of St Pancras Station with its U-shaped plan created better accessibility [113]

## **TRAIN-SHEDS**

Train-sheds is a structure for shelter, either adjacent to the station building or having roof coverings over the tracks and platforms. It may also be an independent building (or structure) to cover the platform area. Train-sheds evolved from a simple wooden lean-to shed into magnificent long spans iron and glass structures to shelter people and trains [113]. The evolution of train-sheds can be seen followed from the use of materials of the time having modern technology.

Most of the station buildings in Malaysia do not have train-sheds that are used as the waiting area, the waiting area is normally a part of the station building for example Taiping (Cat.No.1.2), Batu Tiga (Cat.No.7), Kamunting (Cat.No.9), Port Dickson (Cat.No.11), Batu Gajah (Cat.No.23.1), Bukit Timah (Cat.No.62.2), Batu Anam (Cat.No.67.1), Segamat (Cat.No.69), Tenang (Cat.No.96), Labis (Cat.No.97), Paloh (Cat.No.99), Nyior (Cat.No.100), Kluang (Cat.No.101), Mengkibol (Cat.No.102), Rengam (Cat.No.103), Layang-Layang (Cat.No.104), Kulai (Cat.No.106), Senai (Cat.No.107), Johor Bharu (Cat.No.109.1), Sungai Petani (Cat.No.117.1), Bedong (Cat.No.119), Alor Setar (Cat.No.126.1), and Chamek



(Cat.No.134). The generous overhanging roof eaves normally seen in the station buildings could not be considered as train-sheds, as they are part of the main building.

### **Lean-to-wall and single structure train-shed**

The first type of the train-shed are lean-to-wall shed and single structure train-sheds. Some of the station building applied the lean-to-wall or single structure train-sheds method which covers only the platforms. But sometimes both methods were used to apply in one station building. Normally timber and steel materials were used for the structures.

The first wooden train-sheds were built with timber frame structures incorporating gable roofs and finished with red clay tiles. The structure covers the island platform only and not the overall area. This can be seen in Taiping station building (Cat.No.1.2.4 – No.1).

When steel was introduced, the sheds were built in both steel and timber. The train-sheds in Gemas Station (Cat. No. 94.2.1 – No.3) applied this combination of steel and timber train-sheds. One of the train-sheds is placed adjacent to the station building wall and the other one is placed on the island platform. The train-shed adjacent to the station building wall consists of one steel column placed on a concrete stump having a queen post (Cat.No.94.2.3). Here, two steel columns with double howe roof trusses are used. Meanwhile, at both ends of the train-shed, timber panels were placed to cover the roof sides forming a triangular front on both ends.

Similar train-shed applications can be seen in the station buildings of Britain, namely Barons Court (Figure 4.6) and Turnham Green (Figure 4.7) station buildings can be given as matching examples.



Figure 4.6

Barons

Court stations' train-sheds with steel column and timber panels as coverings

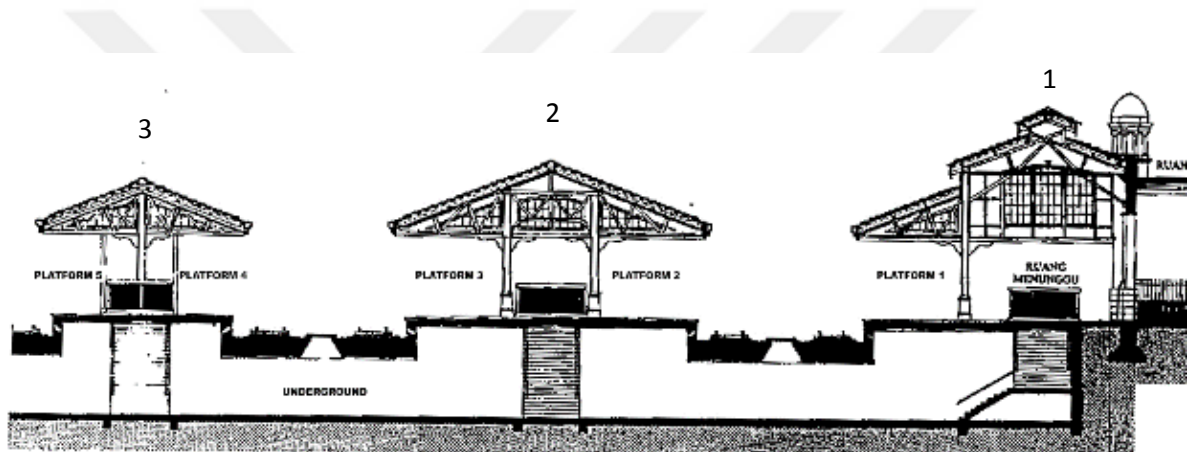


Figure 4.7 Turnham Green stations' train-sheds with steel column and timber panels as coverings

Meanwhile, there are only few train-sheds totally made from steel. This is because such materials are prone to corrosion and unsuitable to Malaysian climate. The lean-to-wall steel train-shed seen can be seen in Klang Station (Cat. No.8.2.1 – No.3&4). The double cantilevered roof trusses covers only the platform area.

Ipoh Station train-sheds' applied both lean-to-wall and single structure train-sheds , each having a different truss system (Cat.No.25.2.3 & 25.2.4, Figure 4.8). Firstly, the lean-to-wall shed on building wall has a double pitched roof featuring extended fink trusses which creates roof lantern on the top. The roof lantern is used for lighting purposes. The fink trusses are supported by struts on both ends. In addition to the outer column, a mono double truss is attached, creating a three tiered pitched roof.

Secondly, a double post columns, single structure shed covered with pitched roof was applied. It is located in the middle of the tracks, on island platform. Similar fink truss system were used.



Thirdly, a single post column with pitched roof was applied on the third platform. Again, fink truss system were used. Ipoh Station trainsheds' applied mostly local style construction methods using steel-and-wood pitched canopies as compared to Kuala Lumpur Station train-sheds'.

Figure 4.8 Ipoh Station with three different train-sheds [87]

### Long spans train-shed

Long spans train-shed was popularize in the middle of the nineteenth century, whereby many large station buildings started to cover bigger area; platforms and tracks. The train-shed is made

of iron, steel and glass materials. This development was inspired by The Crystal Palace designed by Joseph Paxton at The Great Exhibition, London in 1851. This building has given great impact to large station building design with innovative features such as curved roofs made of iron and glass applications.

A large train-shed made of steel and a glass roof covering both; platforms and railway tracks was applied in the old Kuala Lumpur station building (Cat.No.5.2, Figure 4.9). It was the first station building that used such train-sheds. Later, it was demolished when the new Kuala Lumpur station was built. The old train-sheds had a double pitched roof. From the 1893 picture of the demolished station building shown in the catalogue, the materials used of might be steel and glass. The train-sheds resembled Preston Railway Station's train-sheds (Figure 4.10) which was built during 1880 in United Kingdom.

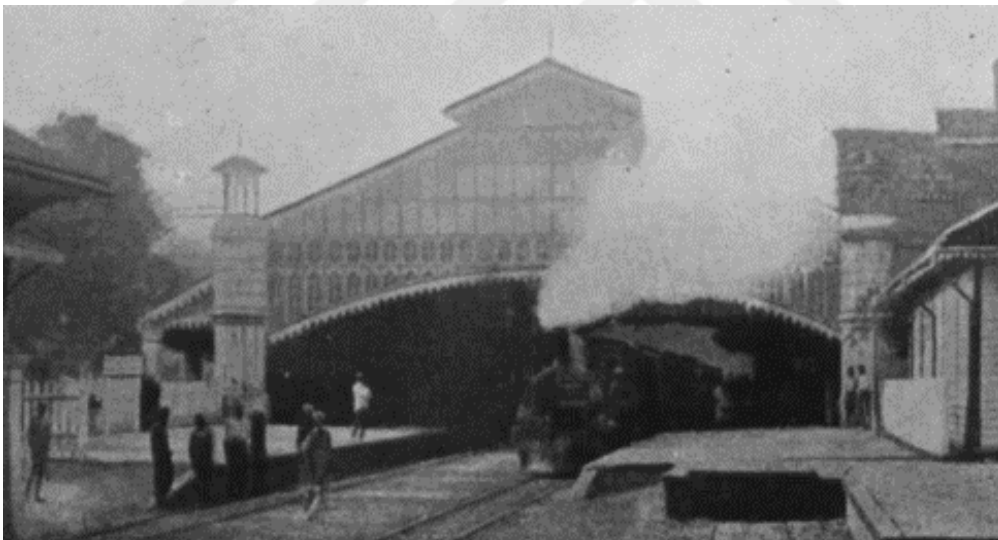


Figure 4.9 Old Kuala Lumpur Station train-sheds' with double pitched roof covering the whole area, [71]





Figure 4.10 Preston Railway Station train-sheds' resembled the old Kuala Lumpur station train-sheds [114]

Meanwhile, the new Kuala Lumpur Station applied similar train-sheds, large steel-frames covering all the platforms, combinations of roof truss systems are used. A combination of fink and pratt trusses each having a roof lantern on top covers the twin sheds and tracks of the station. Kuala Lumpur Station (Cat. No. 5.3.8 – No.1, Figure 4.11), was the only station built by the British having enormous steel and glass train-sheds.

It is similar to one of the earliest train-sheds at Gare Montparnasse, Paris (Figure 4.12) built in 1850-1852. Similar symmetrical twin arches with a pylon in the middle of the island platform is used. But the composition of the trusses used were different. The trusses of the train-sheds is a combination of both stations, Gare Montparnasse, Paris and old Munchen-Hbf Station, Germany, (Figure 4.13) as it applied pitched roof and lantern concept on top of the sheds.

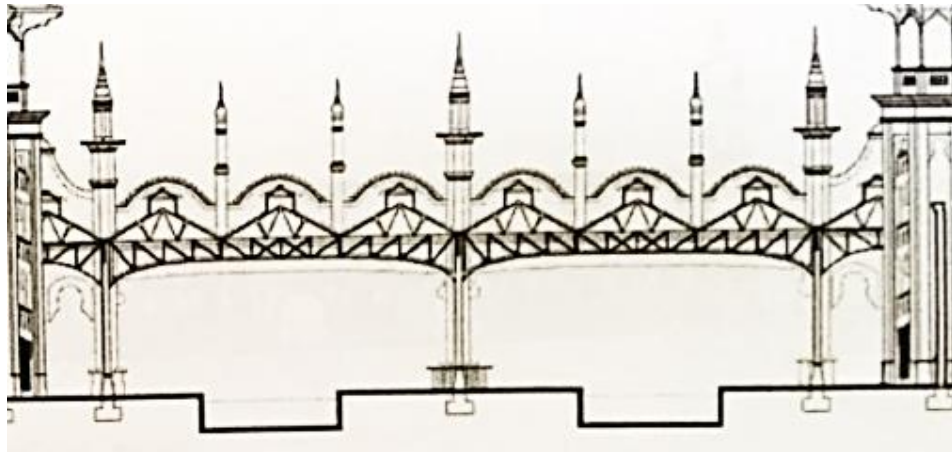


Figure 4.11 Close-up of Kuala Lumpur Station's train-shed [75]

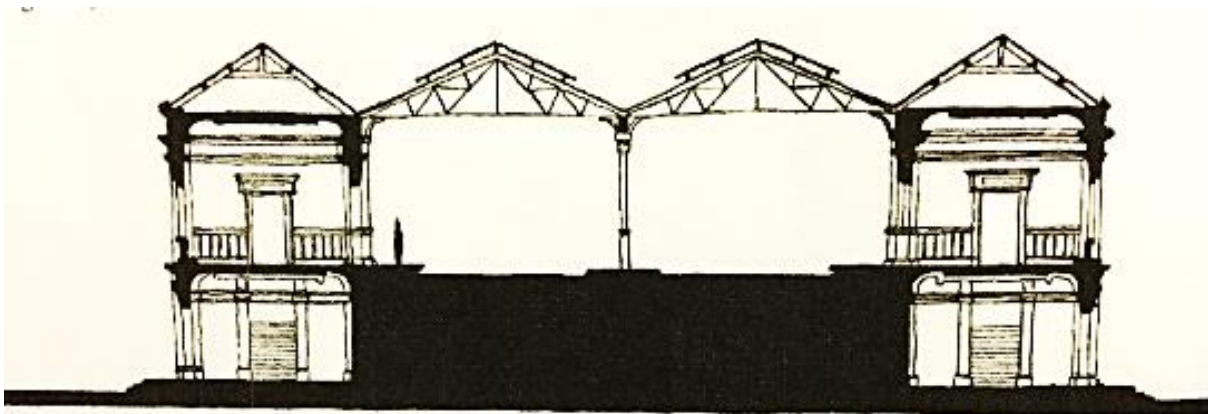


Figure 4.12 Gare Montparnasse, Paris showing double train-sheds [3]

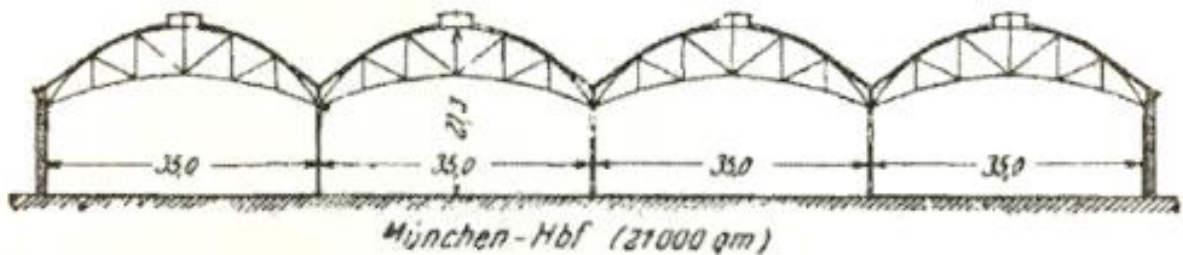


Figure 4.13 Section of Munchen – Hbf, Germany [3]

### Butterfly sheds

The third type of train-sheds is a butterfly sheds. Known as butterfly sheds because of its up-swept, wing-shaped roof. The butterfly shed can be seen in Kluang Station and Tanjong Pagar Station (Cat. No.134.1.6 – No. 2). It only covered the platforms. It is more economical

compared to the previous train-sheds in terms of the usage of materials and maintenance wise. At first, it was made from steel but later, concrete was used.

The design of butterfly shed in Kluang Station (Cat. No. 101.1.3 – No.1, Figure 4.14) used a single column and can be seen in New Haven Railroad Station, USA (Figure 4.15), Mahalakshmi Station, India (Figure 4.16) and Varna Railway Station (Figure 2.42).



Figure 4.14 Kluang Station applied concrete butterfly shed at the island platform

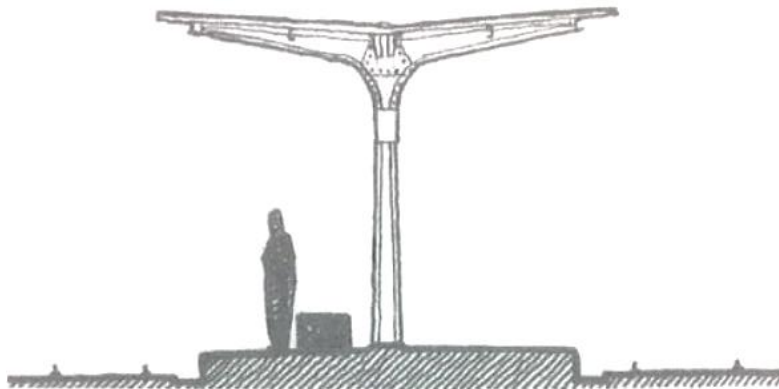


Figure 4.15 New Haven Railroad's butterfly shed [3]

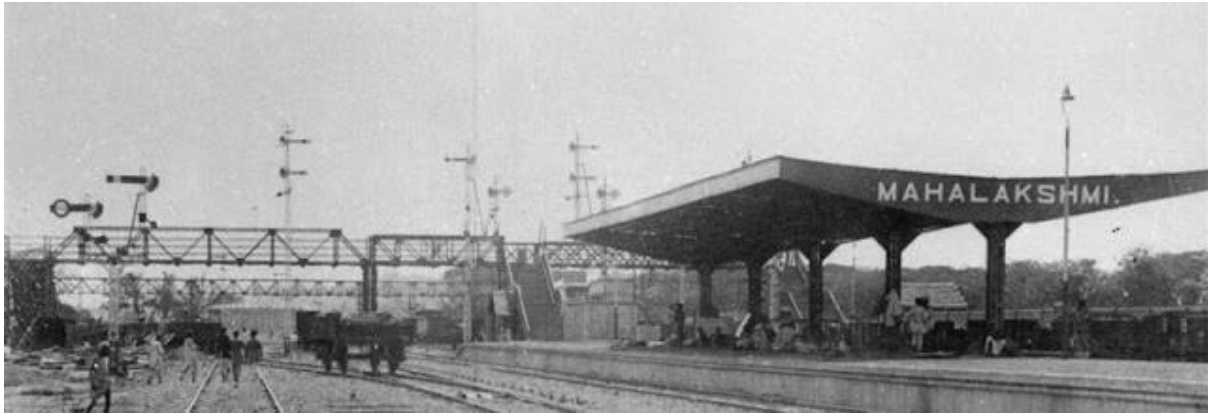


Figure 4.16 Mahalakshmi Station, India applied butterfly shed [115]

Meanwhile the design of butterfly train-sheds in Tanjong Pagar, (Cat. No.135.1.6 – No.2, Figure 4.17) used two columns to support the shed. The same butterfly shed can be seen in Munchen East Station, Germany (Figure 4.18).

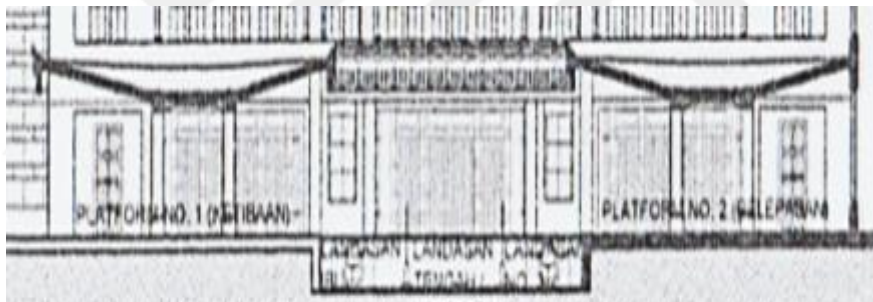


Figure 4.17 Butterfly train-sheds covering the platforms at Tanjong Pagar station [107]



Figure 4.18 Munchen East Station, Germany shows the butterfly train-sheds



## **4.2 ARCHITECTURAL ELEMENTS IN MAIN FACADES**

The main façade of the station buildings is the most important façade. Here can be seen the main stylistic features including the basic elements showing the architectural style of the particular building [116]. Station building of a big terminal can be thought as the urban gateway through which communities find as a landmark or urban nodes or meeting place [12]. This definition expresses that the architecturally distinguished façade is the major part of a building perceived in the first place which bring aesthetical value, by helping people to gain a discriminating memory and recognition of the building.

Architectural elements are the components of buildings. The architectural style of a building forms its uniqueness, combination of designs and construction techniques. Building facade classification according to its architectural style is viewed as the task of classifying each separate architectural element.

The architectural elements of station building facades can be classified according to roofs, domes, columns, towers, pinnacles and finials, arches and arcades, doors, windows, parapets and balustrades. Building façade elements classification will then lead to the architectural styles of the Malaysian West Coastlines' station buildings.

### **ROOFS**

The roofs of the West Coastline station buildings are classified into six types, such as gabled roof (bumbung panjang), hipped roof (bumbung limas bungkus), hip-gabled roof (bumbung limas perabung lima), high gable end roof (bumbung Minangkabau), flat roof, and vaulted roof. Approximately most of the station buildings have steep and pitched roofs to suit the weather of Malaysia, having heavy rainfalls throughout the year, in which is also indigenous for other Malay buildings.

Roof also known as ‘bumbung’ in Malay language, is one of the distinguishing feature of a building. Various roof forms changing from state to state indicates the influence of local traditions [30].

### **Gabled Roof**

The first type of the roofs is gabled roof known as ‘bumbung panjang’ in Malay language. This type of roof has two slopes meeting at central ridge and gables at both ends (Figure 4.19). It is the most common in Malay houses, widely used throughout the Malay Peninsula, [30]. It is also known as the long gabled roof. Since the earlier times, beginning from 1885 till 1910, most of the station buildings were gabled roofed.



Figure 4.19 Typical gabled roof or ‘bumbung panjang’ in a Malay house [30]

There were 59 station buildings (Cat. No.1.1, 1.2, 2, 4, 5.1, 5.2, 5.3, 7, 8.1, 8.2, 10, 11, 13, 14, 17, 20, 21.1, 22.1, 25.1, 25.2, 26, 33, 34.1, 35, 36, 37, 38, 39, 42, 43, 46.1, 48, 51, 53, 54.1, 55.1, 57.1, 59.1, 62.1, 62.2, 66, 67, 70, 79, 86, 89.1, 94.2, 96, 97, 98, 99, 102, 106, 115, 117.1, 125, 126.1, 130.1, 133.1) that applied the gabled roof. The gabled roof is also seen in other British Colonies such as Ambepussa Station, Sri Lanka (Figure 2.44) built in 1864, Junagadh Station, India (Figure 4.20), and Churchgate Station, India (Figure 4.21).



Figure 4.20 The 1895 view of Junagadh Station, India on application of gabled roofs [117]



Figure 4.21 The 1910 view of Churchgate Station, in Mumbai, India on application of gabled roofs [117]

## Hipped Roof

The second roof type is the hipped roof (Figure 4.22) known as ‘bumbung limas bungkus’ in Malay language. This type of roof has four sides slopes upwards. Endut (1993) found that hipped roof was not one of the indigenous Malay roof forms and it was derived from Europe.



Figure 4.22 The main roof used hipped roof or ‘bumbung limas bungkus’ in a Malay house [30]

This type of roof form has been used in nineteen station buildings, (Cat. No. 8.2, 9, 10, 20.1, 23.1, 25.2, 41, 69, 92, 95, 97, 98, 99, 104, 106, 109.2, 119, 126.1, 134). This type of roof form also being applied in other station buildings such as Albury Railway Station (Figure 4.23) in Australia, opened in 1882, and Kew Garden Station, London (Figure 4.24).





Figure 4.23 Hipped roof applied on Albury Railway Station, Australia taken in December 1881 [118]



Figure 4.24 Hipped roof applied on Kew Garden, London

### **Hip–Gabled Roof**

The third type of the roof is hip–gabled roof (Figure 4.25), known as ‘bumbung limas perabung lima’ in Malay language. It defines as a roof with five ridges. In other Malay states, the name of this roof varies according to different states such as in Johor it is known as ‘Limas Bugis’ or ‘Limas Riau’, in Perak state as ‘Limas Potong Perak’ and in Terengganu as ‘Limas Potong Belanda’.

Nine station buildings on the West Coastline use the hip–gabled roof (Cat.No.1.2, 6, 8.2, 19, 101, 103, 117.1, 123, 128 and 135). Hip–gabled roof also can be seen in the Newcastle Station building (Figure 4.1) built during 1890 in Britain.



Figure 4.25 Hip–gabled roof in typical Malay house [119]

### **High Gable End Roof**

The fourth type of roof is high gable end roof, also known as ‘bumbung Minangkabau’ in Malay language. It is similar to gabled-roof except that the edge of both ends being stretched up to form a curve. This roof form (Figure 4.26) said to be originated from the houses of Minangkabau, West Sumatera, Indonesia [120].

High gable end roof was widely used for traditional houses in Negeri Sembilan state in Malay Peninsula but the gable end was toned down and not tilted at all from its original form (Figure 4.27). Bukit Mertajam Station (Cat.No.49.2.1, Figure 4.28) is the only station building that applied high gable end roof. The high gable end roof in Bukit Mertajam station reflects more on the original Minangkabau roof form West Sumatera, Indonesia.



Figure 4.26 High Gable End roof on Minangkabau house, West Sumatera, Indonesia [121]





Figure 4.27 High Gable End roof on house in Negeri Sembilan, Malaysia [120]



Figure 4.28 High Gable End roof on Bukit Mertajam station building [122]

### **Flat Roof**

The fifth type is flat roof. It can be defined as roof were flat or with a low slope of approximately  $10^0$  to  $15^0$ . This type of roof rarely seen in Malaysia as it is unsuitable to the climate. Hence, only one small station building was found having a flat roof, Nyior Station, (Cat.No.100) which has been abandoned and demolished.



Meanwhile, the large station buildings such as Kuala Lumpur station (Cat.No. 5.3) and Ipoh station (Cat.No.25.2) applied flat roof as parapets are placed above the rooflines.

### **Vaulted Roof**

The sixth type is vaulted roof. Vaulted roof resembles a tunnel or a barrel cut horizontally into half. Only one station building has a vaulted roof, the Tanjong Pagar Station (Cat.No.135, Figure 4.29, Figure 4.30). The idea of having a vaulted roof is seen in the Antwerp Central Station, Belgium (Figure 4.31) built in 1905 and Helsinki Central Station, Finland (Figure 2.38) built in 1919. The old Antwerp Central Station was reconstructed in 1998 to convert Antwerp Central from a terminus into a through station. A tunnel was excavated under the station to cater the train entering the station easily and turned out to be the head type station having U-shaped plan.



Figure 4.29 View of the vaulted roof on Tanjong Pagar Station [93]

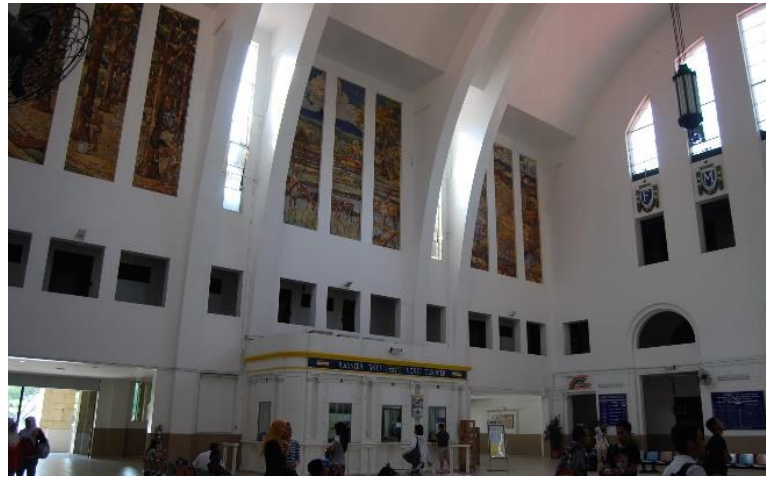


Figure 4.30 View on the interior of the vaulted roof at Tanjong Pagar Station [93]

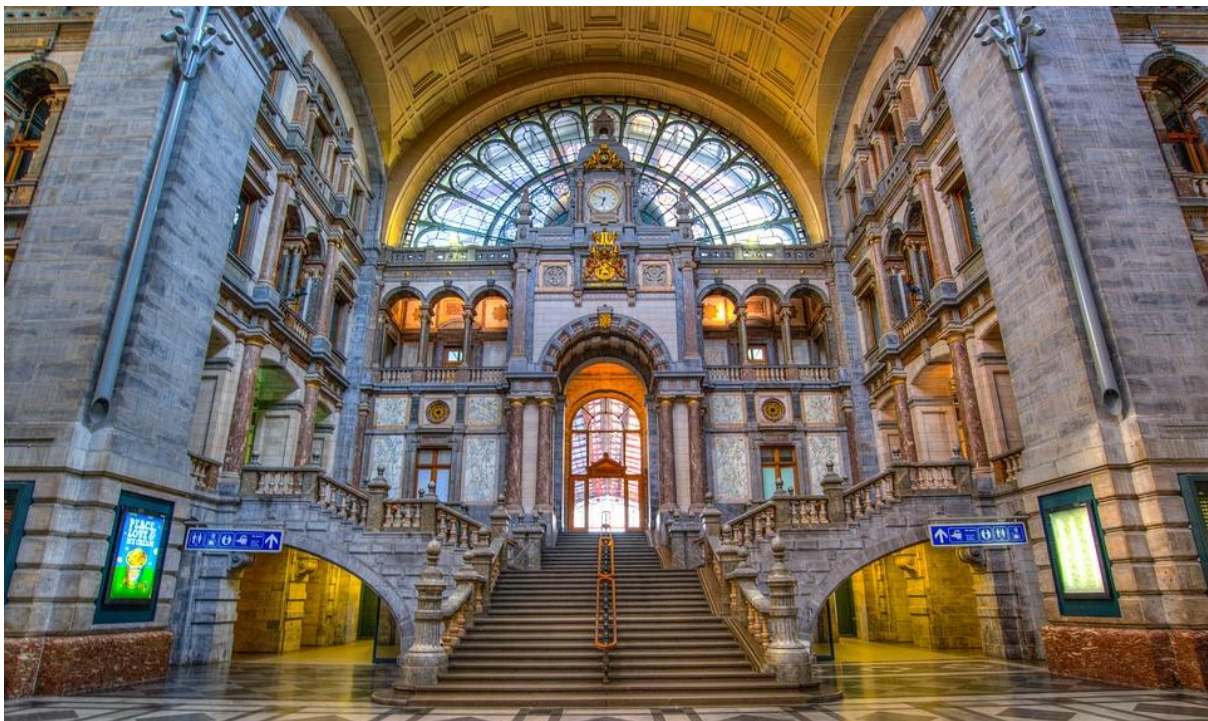


Figure 4.31 The interior showing vaulted roof at Antwerp Central Station [123]

## DOMES

In Malaysia, domes<sup>22</sup> are normally used in religious buildings, particularly mosques and public buildings. Domes are structures particularly design to cover central spaces, however in Malaysia domes may be used as decorative elements having symbolic meaning of Islamic influence. The earliest domes were introduced in Malaysia by the British seen in the Bangunan Sultan Abdul Samad. Previously known as the new Government Offices (Figure 4.32), it was built in 1897 having applied onion-shaped domes.

The application of domes in West Coastline station buildings' can be classified into four types. Domes are seen used in four large station buildings, each in the capital cities of different states. Kuala Lumpur Railway Station (Cat.No.5.3), Seremban Station (Cat.No.10), in Negeri Sembilan, Ipoh Railway Station (Cat.No.25.2) in Perak and Johor Bharu Station (Cat.No.109.2) in the state of Johor

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<sup>22</sup> First used in much of the Middle East and North Africa whence it spread to other parts of the Islamic world, because of its distinctive form the dome has, like the minaret, become a symbol of Islamic architecture, (Dictionary of Islamic Architecture, 2002).



Figure 4.32

Bangunan Sultan Abdul Samad with copper onion-shaped domes [124]

The

### **Hemispherical Dome**

The first type is the hemispherical dome. The dome is half a sphere and typically well known in Roman church architecture. The Pantheon (Figure 4.33) in Rome was constructed between 118 to 128AD is the earliest example found of hemispherical dome. The Pantheon, Rome is the best preserved ancient Roman building as the dome is a single largest, unreinforced concrete dome in the entire world [125].

Two station buildings on the west coastline of Peninsula Malaysia has applied hemispherical dome; Johor Bharu and Kuala Lumpur stations. Johor Bharu station (Cat.No.109.2.2, Figure 4.34) used hemispherical dome in their design, which located at the center of the building on top of the clock tower, surmounted with flagpole finial.



Meanwhile in Kuala Lumpur station (Cat. No 5.3.7 – No.1&2, Figure 4.35) has been applied in Kuala Lumpur Railway Station.

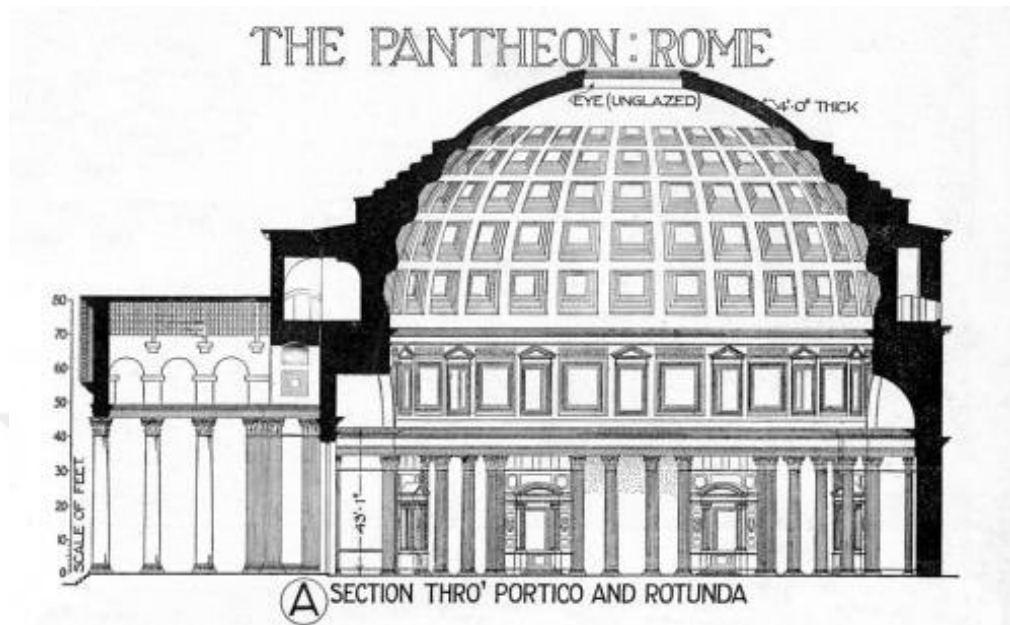


Figure 4.33 Hemispherical dome on the Pantheon, Rome [126]



Figure 4.34 Hemispherical dome on Johor Bharu station



Figure 4.35 Hemispherical dome on Kuala Lumpur station [127]

### Pointed Dome

The second type of dome is pointed dome. Pointed dome define as a dome having sharply pronounced peak. Pointed dome is a significant and important element of Islamic architecture

which were widely utilized for both architectural and symbolical purposes spreads along in many countries such as Iran, Afghanistan, Kazakhstan, Turkmenistan and Uzbekistan [128]. The earliest application of pointed dome is seen in Dome of the Rock (Figure 4.36) located in Jerusalem and established its completion date on 691-692AD.

Only one station building in the west coastline of Peninsula Malaysia applied pointed dome, the Ipoh station (Cat.No.25.2.2 – No.1, Figure 4.37). A large white wash pointed dome

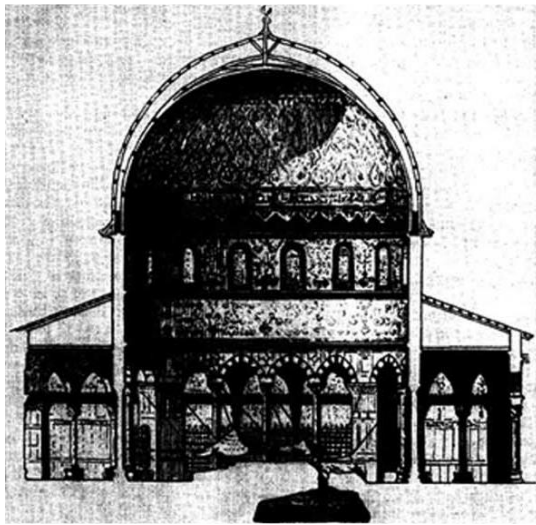


Figure 4.36 Pointed dome on the Dome of the Rock, Jerusalem [128]



Figure 4.37 Pointed dome on Ipoh station

surmounted with overhang eaves with support brackets located above the projecting porticos in the middle of the building façade (Cat.No.25.2.7). The other two smaller domes were located at both corners of the building (Cat. No. 25.2.6). According to study conducted by the MASSA, the structure of the domes is made out of steel and coated with concrete. The domes are placed on drum whereby it is circular and hollow on the inside, meanwhile supported by brackets on the side of the walls.

### Onion-shaped domes

The third type of dome is onion-shaped dome or also known as bulbous dome. It is pointed with its sides curving out making a rounded profile reflecting the shape of an onion. Onion-shaped domes in Malaysia has direct influence from Mogul Architecture of India. The British started to use this element in major buildings of Malaysia, particularly in mosques, public or government administrative buildings. In many occasions, Indian convicts were brought to Malaysia to work as workers in building construction sector [129].

The application of onion-shaped domes was widely spreads throughout Malaya for example the former Federated Malay States Railways Headquarters (Figure 4.38) built in 1905 and Jamek Mosque (Figure 4.39) built in 1909, both located at Kuala Lumpur, Zahir Mosque (Figure 4.40) built in 1912 located at Kedah state and Ubudiah Mosque (Figure 4.41) built in 1917 located at Perak state.

Figure 4.38 Onion-shaped dome applied at former FMSR, Kuala Lumpur, built in 1905

Figure 4.39 Onion-shaped dome applied at Jamek Mosque, Kuala Lumpur, built in 1909 [130]



Onion-shaped dome is applied in Seremban Station (Cat.No.10.1.2 – No.1, Figure 4.42) built



Figure 4.40 Onion-shaped dome at Masjid Zahir, Kedah built in 1912 [131]



Figure 4.41 Onion-shaped dome at Masjid Ubudiah, Perak built in 1917 [132]

in 1891. It was located at the top of the clock tower of Seremban Station building surmounted with an Islamic-Turkish moon shaped finial.



Onion-shaped domes are seen in India, Russia and Islamic Spain specially under the Islamic effects. Onion-shaped domes were used extensively during the Indian Mogul Empire since the reign of Akbar (1556-1605). The first example is the grand dynastic mausoleum, the Tomb of Humayun, (Figure 4.43), in Delhi, India built during 1562-1571 later becoming an important representative of the Mughal architecture. It became an inspiration for Shah Jahan to build the Taj Mahal, India using onion-shaped dome (Moffett et al, 2003). Later, the British architect, John Nash applied the onion-shaped domes on the extension of Royal Pavilion, Brighton (Figure 4.44) in Great Britain, the construction of which started in 1815 and finished in 1823.



Figure 4.42 The application of onion-shaped dome on station building in Seremban station placed on top of the clock tower

*Delhi, tomb of  
mayun, sectional  
ation.*

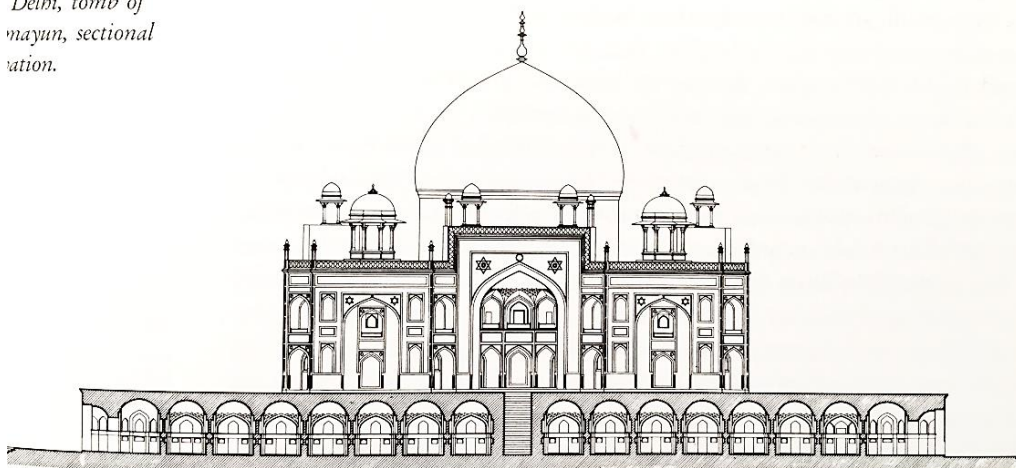


Figure 4.43 Sectional elevation of Tomb of Humayun, 1562-1571, applied onion dome [133]



Figure 4.44 Royal Pavilion in Brighton Great Britain applied onion domes in various sizes [134]

### **Chatri or Domed-kiosk**

Domed-kiosk or mostly known as chatri<sup>23</sup> which means umbrella usually refers to a small, canopied structure placed at the junctions of fortification, or as decorative elements at roof level in mosques, tombs or other buildings [135]. Chatri is a Hindustani word that means a pavilion or kiosk that may stand on its own and widely used in palaces and also forts which were purely decorative and normally have no utility [136]. Meanwhile, in Persian language, ‘cetr’ or ‘cadir’ means tent.

Kuala Lumpur Station has chatris or domed-kiosk located at the corners of the building, integrating well with staircase towers (Cat.No.5.3.6, Figure 4.45). The onion-shaped dome applied in Kuala Lumpur Station is raised on eight multifoil arches surmounted with eaves and support brackets. The columns below continue to project upwards ending up with eight

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<sup>23</sup> Mughal and Hindu term for a domed kiosk on the roof of a temple, tomb or mosque. The domes are usually supported on four columns, (Dictionary of Islamic Architecture, 2002). Also spelled as chatr, chhatri, (Koch, 1991).

miniature pinnacles. Finial is placed on top of an onion dome. This domed-kiosk is known as chatri, extensively used in Indian Mughal architecture.

The chatri is seen at every corner of the Diwan-i-Khas, Fatehpur Sikri which was built in 1570 in Agra during the Mughal period, (Figure 4.46, Figure 4.47). But, chatri came after the Muslim invasion of India in the Turkish period (10<sup>th</sup> Century), which the architecture of India might have already become a mixture of old Indian with Mogul-Turkish-Islamic architecture.

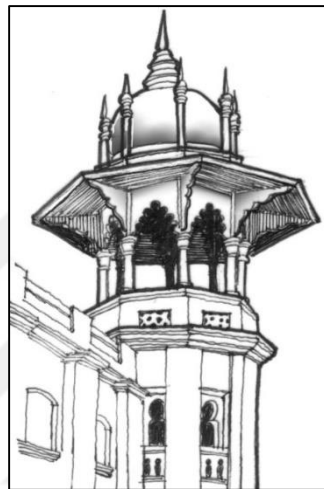


Figure 4.45 Chatri located on top of the staircase tower at Kuala Lumpur Station, Malaysia [129]

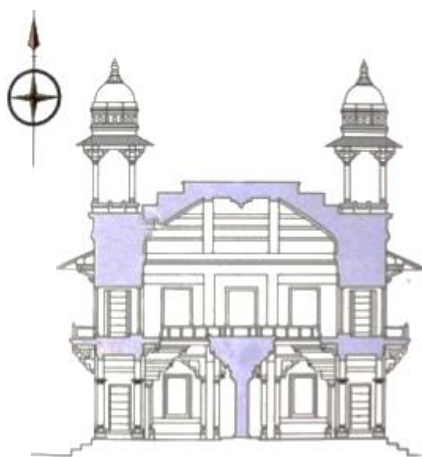


Figure 4.46 Cross section of chatri located at Diwan-iKhas of Fatehpur Sikri, [137]



Figure 4.47: Chatri located at Diwan-iKhas of Fatehpur Sikri, India [138]

## COLUMNS

A vertical support made up of base, shaft and capital; column is categorized according to the materials. There are three types of columns used in the station buildings, namely; (1) timber column, (2) iron column, and (3) concrete column.

### Timber column

The first type is timber column. There are three station buildings using square timber columns with knee braces incorporated with it. The station buildings were Taiping (Cat.No.1.2), Seremban (Cat.No.10) and Kluang (Cat.No.101). Timber columns were used in the earlier years of station buildings constructions, normally of plain column without any decorative elements. Though some of the main station buildings in the city centres may have additional elements such as decorative spandrels or knee braces.

In Seremban station; the base made of concrete meanwhile the shaft, capital and the spandrels of the columns are made totally from timber (Figure 4.48). The pattern of the spandrels might derive from floral motifs. Meanwhile the column shaft pattern is of traditional vernacular.



Figure 4.48 Timber column with decorative floral motifs on its spandrels of Seremban station building



Although the columns are in the same category, there are different additional decorative elements on some of them. In Taiping Station, the timber column is fixed with steel knee braces filled with triangle and circular shape steel (Figure 4.49). This similar knee braces are also found in Kew Station building in London (Figure 4.50). Meanwhile in Kluang Station, steel knee braces on its square timber column was added for the signage purposes (Figure 4.51). The same knee braces also seen in Taiping and Sungai Petani station buildings.

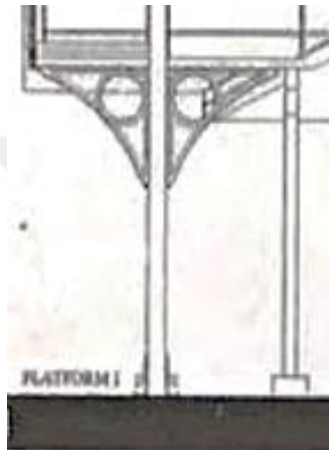


Figure 4.49 Timber column with steel knee braces at Taiping Station, Perak [67]



Figure 4.50 Kew Garden Station in London had the same column and knee braces like in Taiping Station, Perak

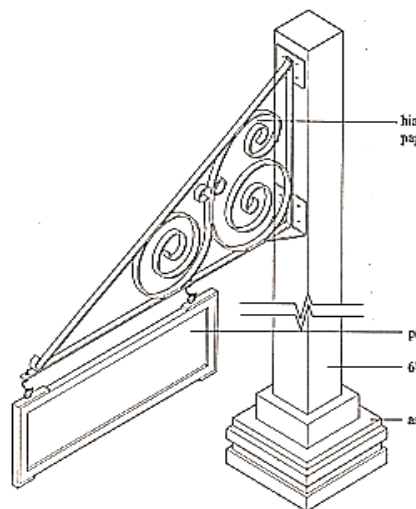


Figure 4.51 Timber column with decorative steel knee braces for signage purposes [102]

## Iron column

The second type is the iron column. The usage of steel might be from the effect of industrialization.

Iron columns with timber knee braces is used in Gemas Station (Cat.No.94.2.3, Figure 4.52). Here, the iron columns are used for both ends of the train-sheds'. However, the iron columns are now concealed behind timber panels. Similar method of steel columns was used in Barons Court (Figure 4.6) and Turnham Green (Figure 4.7) station buildings in Britain for their train-sheds as seen in the earlier part.

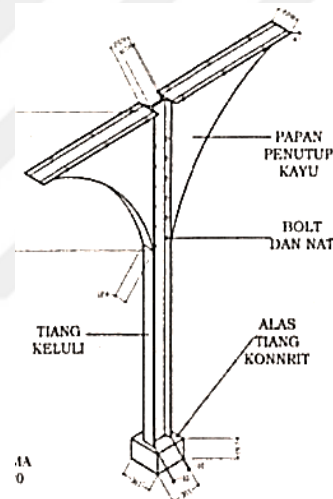


Figure 4.52 Iron column concealed with timber panels in Gemas Station [101]

## Concrete column

The last type is concrete column. There are three station buildings used concrete columns in their buildings; Kuala Lumpur, Ipoh and Alor Setar station building.

In Kuala Lumpur Station, the capital for the column is rather elaborate, when muqarnas or stalactite ornamentation are added (Cat.No.5.3.13 – No.3, Figure 4.53). Though the muqarnas

is influenced by Islamic architecture seen all over the world, for example; the capital columns of the Alhambra Palace, Granada in Spain (Figure 4.54), the muqarnas capital in Malaysia might have direct influenced from Mogul architecture in India as Malaysia mostly affected by the British India colony.



Figure 4.53 Muqarnas capital at Kuala Lumpur station building

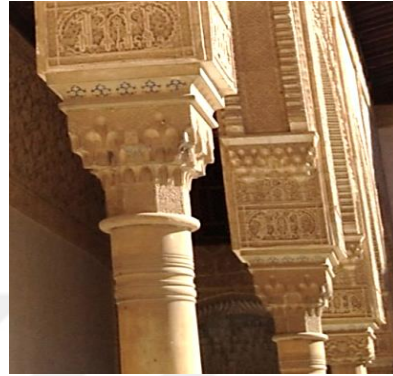


Figure 4.54 Muqarnas capital at Alhambra Palace, Spain

Meanwhile in Ipoh station building, the columns with the egg-and-dart molding seen used all over the building (Cat.No.25.2.5 – No.1, Figure 4.55). The egg-and-dart molding is common ornamentations in Neoclassical Style which was originated from Ancient Greek. This type of ornamentations is very popular in most colonial buildings in Malaysia. In Ipoh Station nearly all columns are decorated with eggs-and-darts ornamentation.



Figure 4.55 The egg-and-darts molding capital at Ipoh station building

In Alor Setar Station (Cat.No.126.1.3 – No.2, Figure 4.56), concrete column has been decorated with steel floral motifs at its knee braces or spandrels. It was a triangular shaped knee braces.



Figure 4.56 The concrete columns with decorative steel knee braces of floral motifs [139]

## **TOWERS, PINNACLES & FINIALS**

### **TOWERS**

A tower can be categorized as one of the distinctive architectural features in a building as it distinguished by its height. Some towers are square, some are octagonal and some are circular in plan. Towers are often topped by cupola that ends with the finial or spire. Towers can be divided into two functional categories seen in station buildings; circulation and clock towers.



## Circulation Towers

A vertical shaft containing a staircase known as circulation or staircase tower. There are not much examples of circulation towers on station buildings in the west coastline, Malaysia as it normally being adapted in large station building. There are two station buildings having circulation towers such as Kuala Lumpur and Ipoh station buildings.

In Kuala Lumpur Station, circulation towers are seen having an octagonal shaped in plan containing a stairwell mounted with a chatri, (Cat.No.5.3.10 & 5.3.15–No.1 & 3, Figure 4.57). These circulation towers are located at every corner of the building. Horseshoe arches are used for the staircase's balustrades.

Meanwhile, Ipoh Stations' circulation towers (Cat.No.24.2.6, Figure 4.58) are placed at both ends of the building. Every edge of the square-shaped circulation towers is decorated with quoins and topped with pointed domes. The segmental and triangular pediments window also seen in the tower.

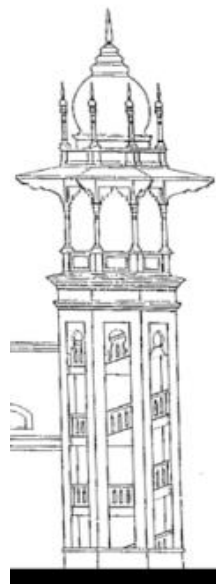


Figure 4.57 Circulation tower topped with chatri at Kuala Lumpur station [75]

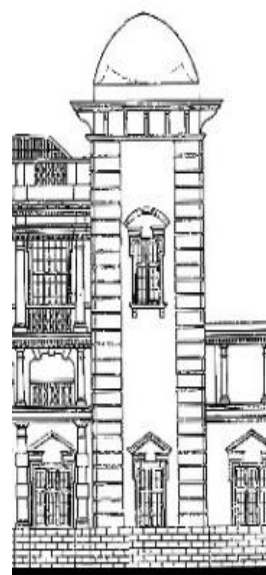


Figure 4.58 Circulation tower topped with pointed dome at Ipoh station [87]

## **Clock Tower**

Sheppard, 1999 defines clock tower as “station clocks became symbols, governing the comings and goings of trains and people”, [140]. Meanwhile Hung, 2003 stated that clock towers normally appeared in places which were rich in symbolism associated with economic and political factors [141]. A station clocks became very important as it helps passengers to have accurate timekeeping for departures and arrivals [142].

Clock towers in Malaysia’s station building mostly placed on top of the roof. Only three station buildings adapted clock tower, Seremban Station (Cat.No.10), Alor Star Station (Cat. No.126.1.1 – No.1) and Johor Bharu Station (Cat.No.109.2.2 – No.1 & 2).

In Seremban Station, a white clock tower was erected on top of the roof topped by an onion dome. A small finial adorned the domes’ top. The clock tower in Seremban Station (Cat.No.10.1.2 – No.1 & Figure 4.59), has similarities with the clock tower of the former Botanic Gardens station building, Glasgow built in 1894 (Figure 4.60) which used an onion-shaped dome with a different finial. They also have balustrades acts as parapet surrounded the balcony.



Figure 4.59 The clock tower with square planned with balustrades all around as parapet and topped with onion dome at Seremban station

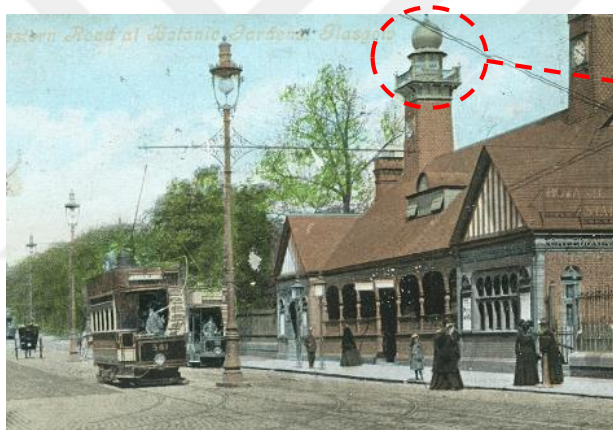


Figure 4.60 The clock tower with square shape based with balustrades all around as parapet and topped with onion dome at former Botanic Gardens Station, Glasgow [143]

A square planned clock tower at the Alor Star Station (Cat.No.126.1.3 – No.1, Figure 4.61) was erected in the middle and placed on top of the roof. The outer skin was surrounded with half circle wooden sheets creating a fish scale appearance. It was mounted with a pyramidal roof with dentils trim cornice and finished with finials symbolizing the national flower, hibiscus. The King's Cross Railway Station's clock tower (Figure 4.62) with its square shaped plan and pyramidal roof topped with finial resembles Alor Star Station clock tower. The clock

is placed on both sides of the planes facing the main road and tracks. While, a gable windows are placed on the other two planes of the tower.



Figure 4.61 The Alor Star Stations' clock tower having square planned and pyramidal roof topped with finial



Figure 4.62 The King's Cross Stations' clock tower with square shape and pyramidal roof topped with finial [144]

The last station building having a clock tower is Johor Bharu Station, built in 1932. The clock tower placed in the centre of the building (Figure 4.63). According to the measured drawing of Johor Bahru Station (Cat.No.109.2.2 – No.1), the clock still exists but during the site visit, the clock was uninstalled from its original place (Cat. No.109.2.3 – No.2).



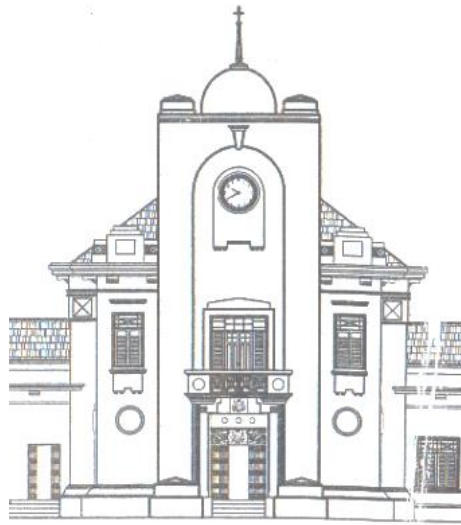


Figure 4.63 The clock tower at the centre of the Johor Bharu station building [103]

## **PINNACLES**

A small turret like, ornamental body or shaft topped with finial or spire is known as pinnacle. Pinnacles are seen in two monumental station buildings, Kuala Lumpur Station and Ipoh Station. In Ipoh Station, the pinnacles are located at the edge of protruding porticoes (Cat.No.25.2.8 – No.2). There are four pinnacles and are mounted with a chatri in a different manner from the Mughal chatri. These pinnacle had an octagonal base with eight columns surmounted with a pointed dome (Figure 4.64). These chatris under European influences as it harmonizes with the other architectural elements mostly of Palladian style.

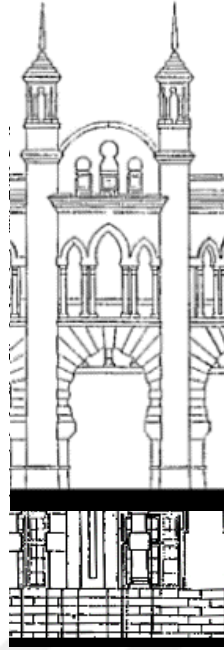


Figure 4.64 The pinnacle at the Ipoh station building [87]

In the Kuala Lumpur Station, there are two types of pinnacles used. The first type of pinnacle applied on the protruding porticoes, (Cat.No.5.3.16 – No. 4, Figure 4.65) has a rotunda plan with a hexagon shaped chatri on top.

Figure 4.65 Pinnacles at Kuala Lumpur station [75]

The other pinnacle or ‘guldasta’ known as the ornamental pinnacle with floral motifs surrounded the domes (Cat.No.5.3.16 – No.2). This guldasta is similar to the one used in Taj Mahal, Agra but less intricate, (Figure 4.66). Guldasta or known as ‘gül deste’<sup>24</sup> derived from the Persian language means a bunch of flowers. The arrangements of the guldasta around the domes resembles a bunch of flowers.



Figure 4.66 Guldasta, the ornamental pinnacle located at both ends of the cornice on top of the entranceway, [145]

## FINIALS

‘*Tunjuk langit*’ is the traditional architectural terminology used for the Malay house finial. It is normally used as one of the roof elements in Malay buildings, traditional houses, palaces and mosques. ‘Buah buton’ (as in Masjid kampong Laut) also refers to the finial. Some old mosques also incorporate this element, called ‘mahkota’ (as in Masjid Kampong Kling, Melaka). Finial or spire can be defined as an ornament which terminates the point of a spire and pinnacle, [146]. In architecture it is employed to emphasize the top of a pinnacle, tower, dome, roof, or other

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<sup>24</sup> The definition taken from Türk Dil Kurumu, <http://www.tdk.gov.tr>, retrieved on 1.12.2018.

prominent features of a structure. Finials might have originated in Asian cultures in the religious temple, the pagoda. The finial is seen in one of the oldest wooden buildings in the world, the Horyu-ji temple, (Figure 4.67) Nara in Japan built in 607 A.D.



Figure 4.67 Decorative finial were place on top of the roof [147]

In 2012, Utaberta et al. published a paper in which they described that there are four types of finials according to their shape and designs, the floral type, the rod type, the rounded type and the cross type, [148]. But it is seen that in the West Coastline station buildings only three types being used.

### **Floral Type Finial**



The first type is floral type. It is seen in Alor Setar Station (Cat.No.126.1.3 – No.1) used in the form of idealized flowers, made from wrought iron, might have symbolized the national Malaysian flower, the hibiscus. Four stalks of hibiscus with its stigma (Figure 4.68) were seen surmounted the clock tower.



Figure 4.68 The hibiscus look-alike floral type finial on top of the clock tower

### **Rod Type Finial**

The second type is rod type refers to thin and elongated shape of finial. The rod type can be seen in eight station buildings but in three different manners.

In the five station buildings; the Taiping (Cat.No.1.2.4–No.2, Figure 4.69a), Resident (Cat.No.14, Figure 4.69b), Ipoh (Cat.No.25.1, Figure 4.69c), Sungei Siput (Cat.No.37, Figure 4.69d) and Tank Road (Cat.No.66, Figure 4.69e) station buildings can be seen the rod type

finial made from wood with the pointed tips. It is commonly used in traditional houses and palaces in the Peninsula Malaysia (Figure 4.70) especially in Malay houses in the state of Perak. This wooden finial is a part of the woodcarving art in Malaysia.



Figure 4.69 5 station buildings using the same pattern of rod type finial



The Seremban station shows the half-moon crescent-shaped finial on the tip of the onion-shaped dome (Cat.No.10.1.02 – No.1, Figure 4.71). This moon-shaped finial normally used in mosques (Figure 4.72) as it is widely used as a symbols or iconography of Islamic religion.



Figure 4.71 Moon-shaped finial at Seremban station



Figure 4.72 Zahir Mosque, Malaysia (1912-1915) used moon-shaped finial [131]

Meanwhile, the finials of Johor Bahru (Cat.No.109.2.2 – No.1, Figure 4.73) and Tanjong Pagar (Cat. No. 135.1.4, Figure 4.74) station buildings categorize as the rod type similar to a flagpole. Concrete moulded flagpoles are normally used in the Art Deco styled building of Malaysia especially in shophouses (Figure 4.75) and offices (Figure 4.76) in Penang and Kuala Lumpur state.



Figure 4.73 Flagpole as finial at Johor Bharu station



Figure 4.74 Flagpole finial at Tanjong Pagar station



Figure 4.75 Art Deco Style, Penang shophouse in 1930s' [149]



Figure 4.76 Built in 1936, Art Deco Style, Wisma Ekran, Jalan Parlimen in Kuala Lumpur in circa 2013 [150]

### Rounded Type Finial

The third type is rounded type of finials can be seen in Kuala Lumpur station building (Cat.No.5.3) with a variety of three different shapes. The first are the finials on the pinnacles surrounding the onion-shaped dome (Figure 4.77). It resembles a lotus flower. The earliest examples can be seen in the minaret of the Mosque of Ibrahim (Figure 4.78) in Golkonda, South India. This lotus-shaped finial had great influence and being widely used by the British architects in public buildings of India, such as Prince of Wales Museum, West India (Figure 4.79) built 1908-1914, and Chennai High Court, India (Figure 4.80) built from 1888-1892.

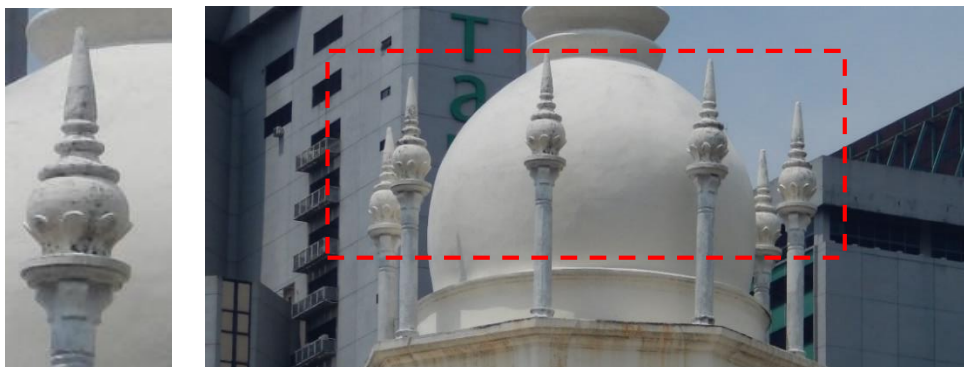


Figure 4.77 The close-up finials in Kuala Lumpur Station resembles the lotus flower





Figure 4.78 The lotus flower resembling finial built around 1600s, the oldest example known is seen in Mosque of Ibrahim, India [151]

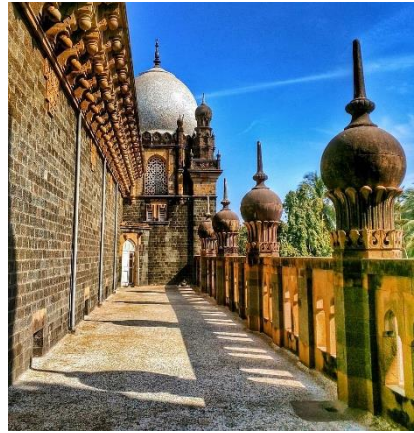


Figure 4.79 The lotus flower finial in the Prince of Wales Museum, India built 1908-1914 [152]



Figure 4.80 The lotus flower finial at Chennai High Court, India [153]

Lotus flower is a national flower in India. It is considered sacred to both Hinduism and Buddhism as a symbolic of pure and divine beauty. Temple architecture in India is always impressive in which lotus flower always played an important role and normally seen in their building as decorative elements.

Meanwhile the other two finials shape from Kuala Lumpur station building were of Buddhist architecture influenced as it resembles the ‘stupa’. Stupa is a Buddhist mound-like structure for

example, seen at Dambulla Golden temple, Sri Lanka (Figure 4.81) built 22 centuries ago (inscribed as UNESCO World Heritage in 1991). One of the stupa-like finial (Figure 4.82) is of circular in plan, meanwhile the other one is of hexagonal stupa-like finial (Figure 4.83).



Figure 4.81 One of the stupa that might resemble the finial, the Dambulla Golden temple in Sri Lanka [154]



Figure 4.82 Circular stupa-like finial



Figure 4.83 Hexagonal stupa-like finial

## ARCHES

The arches used vary in shape and design. Arches is an important element whereby it can interpret ones' building architectural style. There are six types of arches implemented in the West Coastline station buildings, mostly seen in the monumental building. They are the horseshoe<sup>25</sup>, pointed horseshoe<sup>26</sup>, ogee<sup>27</sup>, multifoil<sup>28</sup>, Voussoir<sup>29</sup>, and segmental arch.

<sup>25</sup>According to the Dictionary of Islamic Architecture, horseshoe arches can be defined as those where the arch starts to curve inwards above the level of the capital. It is also known as keyhole arch and Moorish arch.

<sup>26</sup> The improvisations of combining the pointed arch and horseshoe arch.

<sup>27</sup> An arch which composed of two ogees, mirrored left-to-right and meeting at an apex.

<sup>28</sup> The term 'foil' means leaf which indicated the number of foil used normally by prefix; trefoil, quatrefoil. The multifoil arch was invented in order to gain and maximize the headroom height (Saoud, 2002).

<sup>29</sup>Wedge-shaped arch typically a stone with keystone and the springer.

## Horseshoe and Pointed Horseshoe Arches

The horseshoe arch is used in the Kuala Lumpur station building (Cat.No.5.3.14 – No.1). The first adaptation in Islamic architecture, is found in Umayyad Mosque of Damascus, built between 706-715 AD [155]. But the horseshoe arches believed to be developed before Islamic period, during the Visigoth period in the Iberian Peninsula around 7<sup>th</sup> century (De Montequin, 1991). Only a small number of churches are left mostly in North Spain and Portugal which are believed to be of Visigoth origin. The earliest example is found in the Church of San Juan de Banos, Palencia (Figure 4.84) believed to be built in 661AD [156]. It well developed in North Africa, in the Great Mosque of Kairouan, Tunisia, 724-728 (Figure 4.85). However, the horseshoe arch became famous when it was introduced in the Great Mosque of Cordoba, Spain, (756-796).



Figure 4.84 View of horseshoe arch on the west door of San Juan de Banor Church in Palencia, Spain built in 661AD [157]



Figure 4.85 View of horseshoe arch on the inner courtyard of the Great Mosque of Kairouan, Tunisia [158]

Meanwhile the pointed horseshoe arches dominated the colonnaded corridor of the Kuala Lumpur station building. A series of pointed double horseshoe arches are located on the ground floor of the main façade portico. Meanwhile, a series of pointed tripartite horseshoe arches are located on the first floor of the protruding porticoes (Cat.No.5.3.11 – No.3, Figure 4.86) and pointed quadruplet horseshoe arches are located at the first floor portico of the main facade (Cat. No. 5.3.14 – No. 2). Some of the examples can be seen in Sa'din Tombs built in 1590 in Morocco (Figure 4.87), similar to the pointed tripartite horseshoe arches and the Toledo Railway Station built in years,1919-1920 in Toledo, Spain (Figure 4.88) of pointed horseshoe arches.



Figure 4.86 The pointed tripartite horseshoe arches in Kuala Lumpur station building



Figure 4.87 The pointed tripartite horseshoe arches in Sa'din Tombs, Marrakesh [159]



Figure 4.88 The main hall of the Toledo Railway Station, Spain; pointed horseshoe arches on the wall

### Ogee Arch

The third type of arch; introduced mostly in Malaya by the British.

The earliest example is station building



ogee arch was public buildings in

used in Kuala Lumpur (Cat.No.5.3.10 – No.1,

Figure 4.89) normally seen in the Gothic architecture. It is located at the ground floor of the protruding entrance porticoes. Ogee arches are also seen on the ground floor of the Old Supreme Court, Kuala Lumpur Malaysia (Figure 4.90). The constructions of the building



Figure 4.89 Ogee arches at Kuala Lumpur station



started in 1912 and finished in 1915. Both buildings were designed by the same architect, A.B. Hubback.

### **Multifoil Arch**

The fourth type of the arches, the multifoil arch (Cat.No.5.3.14 – No.4) was originated from Andalusian architecture, when they implemented the arches of the Great Mosque of Cordoba, Spain, 756-796 (Figure 4.91). Multifoil arches were widely used in major structures in the Red Fort, Old Delhi, India in Diwan-i Am, Diwan-i Khas, Khas Mahal, Rang Mahal and Shahi Burj.

This historic fort was built during the reign of Shah Jahan, the fifth Mughal

Figure 4.90 Ogee arches dominating the ground floor of the Old Supreme Court, Kuala Lumpur Malaysia

Emperor in the year 1639 and finished in 1648.



Figure 4.91 Interlocking multi-lobed arches inside the Great Mosque of Cordoba, Spain

The multifoil arches being implemented on the chatri or pavilions which were located at every corner of the Kuala Lumpur Railway station building. In Malaysia, the multifoil arches were introduced by the British, which can be seen in some public and religious buildings; the old Municipal Office and Town Hall, Kuala Lumpur (Figure 4.92) built in 1905 and Jamek Mosque, Kuala Lumpur (Figure 4.93) built in 1909. Both of the buildings were designed by A. B. Hubback.

Probably this was the most advanced in arch technology being made in Islamic architecture as it was then becoming the most favourable decorative arch being used around the world from Spain to India.



Figure 4.92 Multifoil arches at the former Municipal Office and Town Hall, Kuala Lumpur [160]





Figure 4.93 Multifoil arches used to enclose the Jamek Mosque, Kuala Lumpur [130]

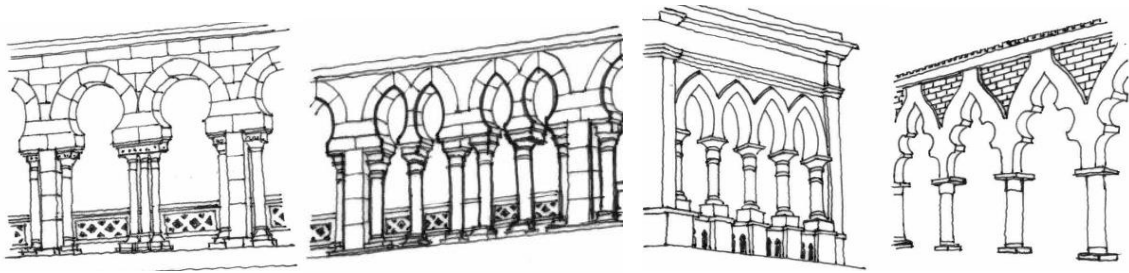


Figure 4.94 Various sketches of horseshoe arches, pointed horseshoe arches and multifoil arches from public buildings in Kuala Lumpur, Malaysia [129]

These three types of arches, horseshoe, pointed horseshoe and multifoil arches can be seen a lot in other public buildings in Kuala Lumpur, Malaysia built during the British Era such as the former Federated Malay States Railways Headquarters (Figure 4.95) built in 1896-1905 and the Federated Malay States Railways Head Administration Office previously known as KTMB Headquarters (Figure 4.96) built in 1914-1917, both designed by the British architect, A. B. Hubback.



Figure 4.95 A range of multifoil arches, horseshoe arches and pointed horseshoe arches at former FMSR Headquarters, Kuala Lumpur Malaysia





Figure 4.96 Pointed horseshoe arches on the ground floor, horseshoe arches of first floor and the twin series of pointed horseshoe arches on the second floor at KTMB Headquarters building, Kuala Lumpur Malaysia

### **Voussoir Arch**

The fifth type is voussoir arch or commonly known as the Roman arch. It was developed by the Romans but it was favoured by the Etruscans for the usage of domestic buildings as well as in the city gates, bridges and other public monuments [125].

In Ipoh Station, voussoir arches with keystones dominated most of the building, creating a British Palladian style characteristics (Cat.No.25.2.2- No.1, Figure 4.97). The same approaches used in Kuala Lumpur stations' voussoir horseshoe arches (Figure 4.98) as seen on the stuccoes wall finishes appearance.

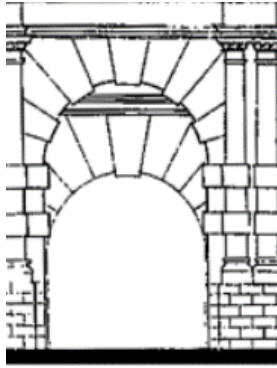


Figure 4.97 Voussoir arches dominating the ground floor creating arcades in Ipoh station building



Figure 4.98 Voussoir horseshoe arches in Kuala Lumpur station building applied similar approaches on its wall appearance

The same arch was used in the Tanjong Pagar station building but the grey wall finishes created a rustic effect (Cat. No. 135.1.1, Figure 4.99 & 4.100). The rustication of sandstone walls is a dummy appearance as seen in most of the old buildings in the United Kingdom.

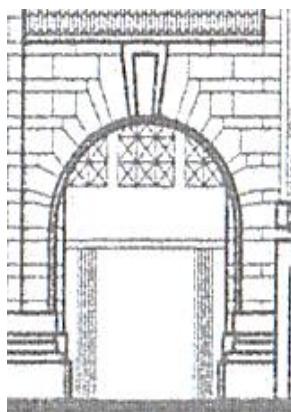


Figure 4.99 The view of the voussoir arches at Tanjong Pagar Station



Figure 4.100 The interior view of the voussoir arches at Tanjong Pagar Station [129]

### Segmental Arch

The last type is the segmental arch. It was developed by the Romans and mostly used for bridges. The segmental arch (Figure 4.101) is seen in Ipoh station building at the mezzanine floor. But later windows being added as an infills to create more spaces in the building (Figure 4.102).

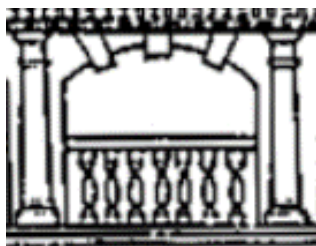


Figure 4.101 The segmental mental arch on Ipoh station building [87]

Figure 4.102 The segmental mental arch later being added windows to create spaces on Ipoh station building

## DOORS

Most of the station buildings' door types had plain panels made of timber. While, few station building used the double panels' glass door. In addition, there are also timber panel door with trims of a timber framed with fixed glass, Taiping Station (Cat.No.1.2) and timber louvered, Alor Setar Station (Cat.No.126.1). Earlier station buildings also have no decorative elements on the door such as Taiping Station (Cat.No. 1.2), Klang Station (Cat.No. 8.2), Tapah Road (Cat. No. 22.1), Gemas Station (Cat. No. 94.2), Kluang Station (Cat. No. 101), Sungai Petani Station (Cat. No. 117.1), and Alor Setar Station (Cat. No. 126.1).

In Ipoh Station building, there are a single panel door with trim and some of the doors were made of double timber panels having fixed glasses or double timber louvered panels with fixed louvered windows of the door. Both of these doors were decorated with triangular pediments embedded together dentil trim. But the main entrance of the building used semi-circular automated glass doors similar to the main entrance of Kuala Lumpur Station. At Kuala Lumpur Station (Cat.No.5.3.13 – No.1 & 2), the horseshoe-shaped door has been adapted as a continuous resemblance with the horseshoe-shaped windows.

## WINDOWS



Windows are used to gain natural lighting and ventilation in buildings as well as to serve as an emergency exit. There are varieties of window types station buildings. They are categorized as; 1) plain casement divided into two sections; double casement and windows having three or more casements, 2) casement or sash with trim divided into four sections; louvered, leaded, pediment, circular arch with a keystone, and 3) horseshoe shaped window (Table 4.3). All windows were made of timber.

There are windows with lattice and leaded upper parts applied to provide additional natural ventilation for the space such as in Gemas (Cat.No.94.2), Kluang (Cat.No.101) and Alor Setar station (Cat. No.126.1) buildings. These latticed windows are similar to Malay traditional house windows (Figure 4.103), where the upper and lower lattices help to increase air ventilation as compared to solid window panels. As in Figure 4.104, the idea of having natural ventilations adapted in station buildings either with leaded or louvered upper parts are seen. In most of station buildings window types are square rectangular basic window shapes having no decorative elements as compared to the Malay traditional house.



Figure 4.103 Traditional Malay house having long window panel with upper part having decorative elements creates better and natural ventilations [161]

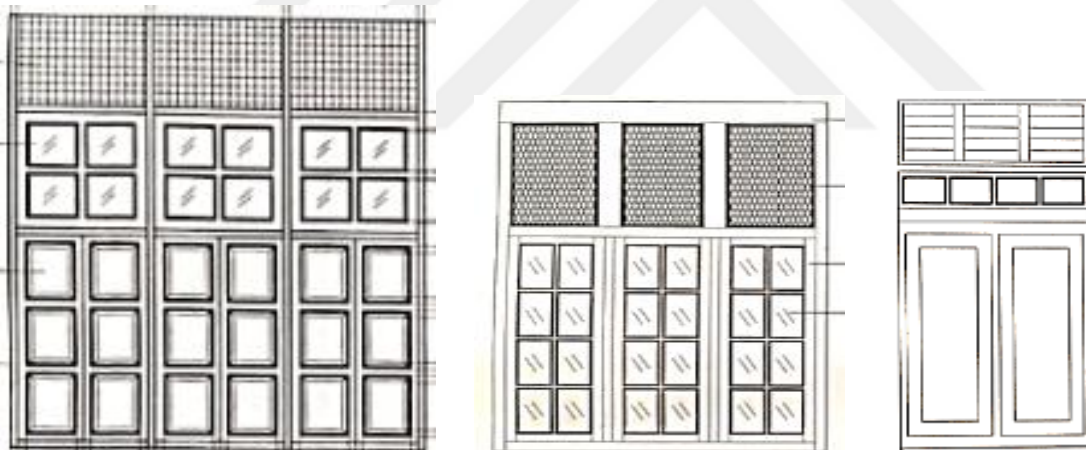


Figure 4.104 Ledged lattices on the upper part of the Gemas and Kluang station buildings meanwhile louvered lattices seen in Alor Setar station building [162]

In some station buildings, windows of special design and style is used for example in Kuala Lumpur Station (Cat.No.5.3.13 – No.4) when horseshoe-shaped window is used. Although it is widely used during the Caliphate eras in Islamic buildings around 12<sup>th</sup> to 17<sup>th</sup> Century, horseshoe arches became popular again amongst the Western World during the Moorish Revival when it was widely used in synagogues.

However, Ipoh Station used casement windows with triangular or segmental open pediments, embedded crossheads with dentil trims (Cat.No.25.2.6 – No.4 & 5). It also can be seen at Huddersfield Railway Station, England built in 1846-1850 (Figure 4.105). Meanwhile in Malaysian shophouses in Kuala Lumpur, the application of segmental and triangular pediment trims incorporated with long vertical windows as it provides airiness to buildings (Figure 4.106, Figure 4.107).



Figure 4.105 Huddersfield Station, England seen with porticos and windows of triangular pediment trims, [163]

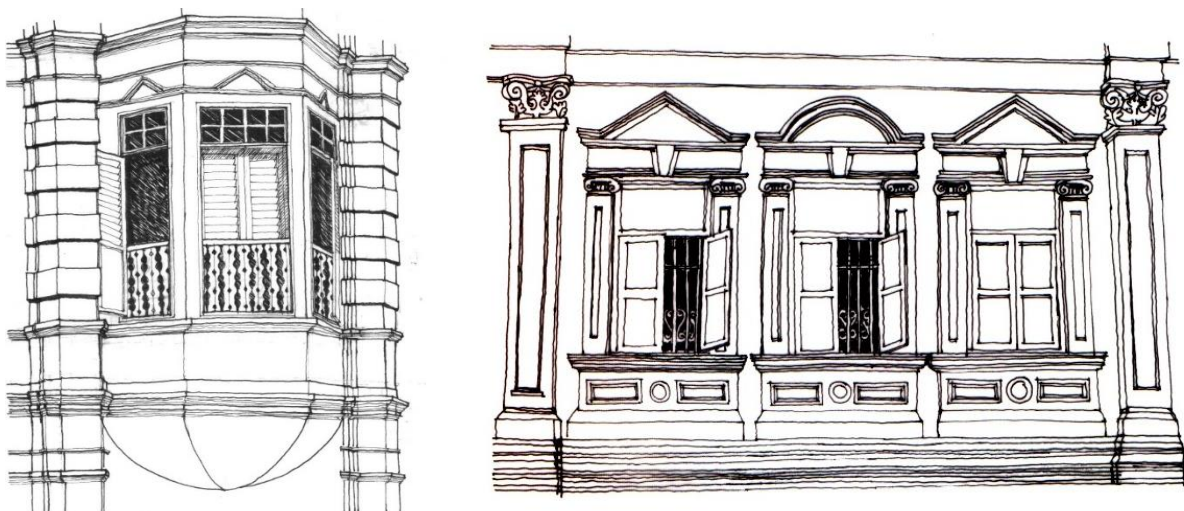


Figure 4.106 The application of triangular and circular pediment trims on old shophouses buildings around Kuala Lumpur, [129]



Figure 4.107 The application of segmental pediment trims with vertically long windows on old shophouses buildings around Kuala Lumpur [129]

Another type of window used is the tripartite Palladian window consists of a central arched opening with two smaller rectangular openings on either side (Cat. No 25 .2.7 – No.4, Figure 4.108). Four circular columns with egg-and-darts molding applied as its capital (Cat.No.25.2.5 – No.1). These Palladian windows are placed on its protruding porticoes The Ipoh Stations' window has an open pediment as its trim which can be described as one of the characteristics of neoclassical styles. It is widely known as the Palladian or Venetian window, similar to the shophouses in Kuala Lumpur but with different kind of window panels used (Figure 4.109). The window panels used in Ipoh station are of timber glass panels meanwhile timber louvered panels are used in Figure 4.109.

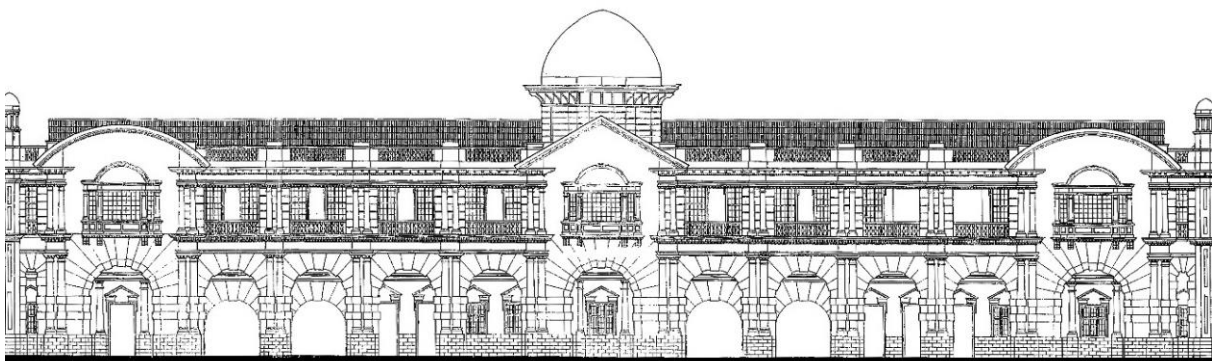


Figure 4.108 Palladian windows located at three main protruding porticoes, giving the effects of Palladianism [87]



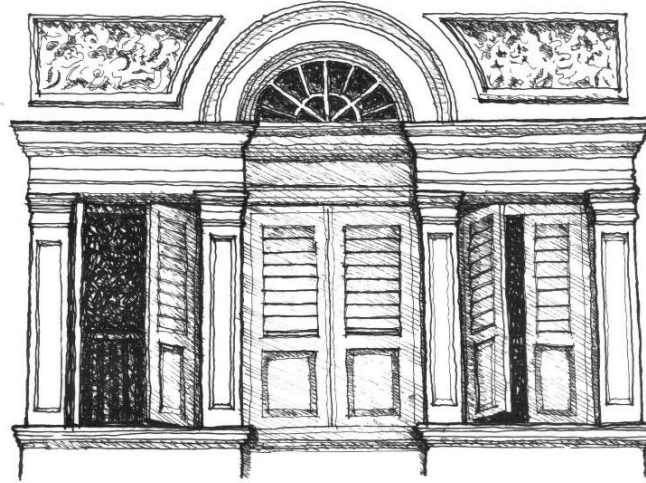


Figure 4.109 The application of segmental pediment trims with vertically long windows on old shophouses buildings around Kuala Lumpur, [129]

Tanjong Pagar Station (Cat.No.135.1.8 – No.1 & 2, 135.1.10), there were two types of window used; one was circular sash window with keystone. In addition, two lion-faced figurines were found at the crown moldings of each window. Various elements combined in the crown moldings such as floral element, eggs and darts, dentil elements and Ionic columns. Another type of window applied was the square double panel glass windows with concrete canopies located on the second floor. Concrete canopies on top of the windows also being applied in Art Decos' buildings in Malaysia, for example Wisma Ekran, Kuala Lumpur (Figure 4.76).

## PARAPETS

Parapet refers to wall extended over the roof level. Some parapets are in horizontal forms and sometimes it has a triangular or circular form create a higher gable than the adjoining parapets. Parapets do not exist in most of the station buildings on the West Coastline which have pitched roofs.

Photographs from the catalogue shows that only three monumental station buildings on the West Coastline applied parapets, Kuala Lumpur Railway (Cat.No.5.3.10 – No.1 & 5.3.11 – No.2), Ipoh (Cat.No.25.2.5 – No.3 & 4) and Johor Bahru station (Cat.No.110.2.4 – No.6) buildings.

In Kuala Lumpur Station, the parapets are elaborately expressed way above the roof lines (Figure 4.110). It is almost like another one storey wall but serves as ‘dummy wall’. This parapet wall is decorated with balustrades and pinnacles being positioned at certain intervals. There are two types of parapets applied in Kuala Lumpur Railway Station building; the parapet consists of a main semicircular arch inside of which are smaller three horseshoe arches. It also includes miniature hexagon shaped chatri on the top (tip) on both sides act as pinnacles and continuously with a series of octagonal shaped balustrades surrounding the edges of the building, (Cat.No.5.3.11 – No.2). On the entrance which takes place on the axis of the building roof a second type parapet is placed. It consists of a muqarnas columns with horse-shoe arches forming a colonnade ending with battlements at top. At the corners of each protruding entrances’ takes place a pinnacle ending with a hexagon shaped chatri, separating the balustrades into parts (Cat.No.5.3.10 – No.1).



Figure 4.110 Both parapets are seen above the rooflines of Kuala Lumpur Station, Malaysia.

While in Ipoh Station (Cat.No.25.2.4 – No.3 & 4), the pitched roof covered with red clay tiles in front of which battlement like balustrade comprises of a segmental or triangular pediment with dentil trim surrounded with segmented bulbous balusters similar to classical Corinthian balustrades. Below the drum, takes place a triangular pediment in the midst of the balustrades. The roof balustrade acts as a parapet wall on the building (Figure 4.111). A long balustrade was used almost systematically to define horizontal roofline, sometimes interrupted with columns.



Figure 4.111 Balustrades along the roofline acts as parapet in Ipoh Railway Station

The parapet is similar to the Old Town Hall (Figure 4.112) in Penang Malaysia, Maradana Station (Figure 2.46) in Sri Lanka, and Burlington House (Figure 4.113) in London. Meanwhile, triangular pediment, balustrades or sometimes combination of both can be seen a lot in old shophouses in Kuala Lumpur, Malaysia (Figure 4.114). Cole (2002) stated that a long balustrade was used systematically to define horizontal roofline in Palladian style. On the other hand, at Johor Bharu Station building (Cat.No.109.2.4 – No.6), the parapet wall used plain molding similar to classic entablature with dentils.



Figure 4.112 The Old Town Hall, Georgetown has similarities on its parapet with Ipoh Railway Station, [129]



Figure 4.113 Burlington House, London (1715) used classical balustrade as its roofline, [125]





Figure 4.114 The application of segmental pediment and balustrades as parapets on old shophouses buildings around Kuala Lumpur, [129]

## BALUSTRADES

Balustrade<sup>30</sup> can be found as one of the façade elements in a building. In Kuala Lumpur Station, keyhole arches were used at the balustrade of the stairway (Figure 4.115). The pattern was applied to coordinate with the arches which mostly of horseshoe and pointed arches. While a series of octagonal shapes (Cat.No.5.3.13– No.5, Figure 4.116) were applied along the balustrade corridor and also along the roof edges as a parapet wall (Cat.No.5.3.11 – No.1 & 3).



Figure 4.115 The key hole arches balustrade at the stairways



Figure 4.116 A series of octagonal shapes applied on balustrade corridor

On the other hand, Ipoh Station applied the segmented bulbous vase-like balusters (Figure 4.117) along the corridor and the parapet wall. Though it might be inherited from the Renaissance, the bulbous vase-like baluster is commonly used during the Palladianism in the early 18<sup>th</sup> century. A Southern-cross design was used at the balcony of Johor Bharu Station (Cat. No. 110.2.4 – No. 2 & 4, Figure 4.118) as its balustrade.



Figure 4.117 Segmented bulbous vase-like balustrades

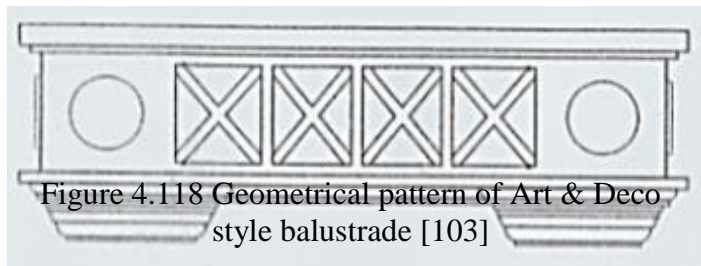


Figure 4.118 Geometrical pattern of Art & Deco style balustrade [103]

<sup>30</sup> Balustrade derived from the form's constituent posts, called balusters; a name coined in 17th-century Italy for the bulbous item's that resembles blossoming pomegranate flowers (Owens, 2015).

### 4.3 CLASSIFICATION OF STYLES USED ON STATION BUILDINGS

The catalogue presented in Chapter 3 is used to identify and establish an accurate timeline on the West Coastline station buildings' constructions, 1886-1957. Pictorial surveys of station buildings indicate the connection of architectural styles between the British and Malaysia vernacular styles. Meanwhile early in this chapter, plan, main façades architectural elements were identified and classified for further interpretation of their styles influenced.

Architectural styles show phases of trends according to historical periods, regions and cultural effects. The uniqueness of architectural styles comes from the fact that each style combines a certain set of architectural elements and ornamentations. The forms, design and proportions of the architectural elements submit to the specific rules of each style. Facades of architectural styles do not repeat each other, since the variations of structural elements, facade decorations and ornamentations are unlimited.

Being colonised by three foreign countries, the Portuguese (1511-1641), the Dutch (1641-1824) and the British (1824-1957), Malaysian architecture ended up with vast architectural styles and building types ([8], [164]).

Under British rule for more than 130 years, many British colonial buildings survived. She became a powerful nation via the use and exploitations of natural and economic resources of her-foreign colonies. This led to Industrial Revolution in England which later expanded to the rest of the world. There were extensive developments in land transportations and infra-structures mainly in South East Asian colonies. This greatly helped in transportation of goods and commodities such as tin and rubber. The network was also furnished with railway stations to facilitate travels of goods and commuters. This further stimulated the growth of tin industry, and later the expansion of new industry, agriculture. The station buildings grew rapidly on the West Coastline in tandem with economic progressions provided by tin and rubber industry.

When the English East India Company was disbanded in 1858, all of its possessions were changed and transferred to London which mean that the British in India was directly administered from the Colonial Office in London. Some of the British Colonies officers came directly from Great Britain and some have experienced working in other British colonies, came to Malaysia working in various positions as government officers as engineers, surveyors, architects and draughtsman.

Qualified architects were employed by the British colonial governments only after 1895. Architects involved; A. C. Norman from 1895 to 1903 in Malaya, R. A. J. Bidwell from 1895 to 1897 in Selangor, and A.B. Hubback from 1901 to 1910 in Selangor, and C. G. Boutler from 1913 to 1919 in Alor Setar [165]. Most of which came from Britain to work in Malaya as government architects in Public Works Department (PWD), on public building projects. They brought together and shared their architectural skills and what they learned in a way to reflect the sense of imperialist tradition [8].

Professional architects also came and worked in all-round civil engineering firm which carried all kind of construction works including building design. One of the famous engineering firms, widely spread throughout the Peninsula Malaysia was the “Swan and Lermitt” (1887-1892) based in Singapore. In 1892, the name changed to “Swan and Maclaren” and continued to work until today in Singapore. Some of the PWD architects in Federated Malay States leaved their government and joined to work in the relevant firm, Swan and Maclaren such as R. A. J. Bidwell in 1897 [165]. A.B. Hubback also resigned from government in December 1897, to get involved in private practices.

There is no evidence mentioning about the architects who designed the small station buildings, especially the ones having vernacular features in the archives. In most of the British colonial countries, all of the construction and designing of buildings mainly public buildings are

subjected to the responsibilities of PWD officers [8]. But only the names of the architects of monumental station buildings were mentioned in the archives.

According to the agreement made between A.B. Hubback and the Crown Agents for the Colonies of the Downing Street London in the Country of Middlesex on behalf of the Government of Selangor (the Government) appointed Arthur Benison Hubback, as the Chief Draughtsman in PWD of the state of Selangor on 15<sup>th</sup> May 1895. Later in 1901 he was appointed as the Architectural Assistant in PWD of Federated Malay States. He had no experienced working in any other British colony as Malaya was the colony he was first assigned for his job as Chief Draughtsman (ANM, 2017).

As stated on his fellowship application in the Royal Institutes of British Architects dated 27<sup>th</sup> May 1909, he designed one of the largest and monumental station buildings, Kuala Lumpur Station, (Cat.No.5.3) besides many other public buildings. Ipoh Station building was the last station designed by A.B. Hubback before he went back to the United Kingdom in March 1909. Besides architects, engineers in government officers were also involved in building constructions. Charles Edwin Spooner, one of the engineers who had contributed a lot in the urban development of Selangor, as he was assigned as the state engineer of the Selangor PWD, in 1891. He has experienced working in Ceylon for 14 years (1876-1891). During the year 1901, Charles Edwin Spooner, was appointed as the General Manager of the Federated Malay States Railways. Spooner might have influences his architects in adapting their buildings to Mughal Style.

Most of the British architects were naturally under the influence of contemporary European and British neo classical and eclectic styles. There is nothing mentioned on the overall architectural styles of Malaysian railway station buildings. Ahmad (1993) only mentioned that Kuala Lumpur station is Moorish influenced though no criticism made on the architectural styles of railway station buildings of Malaysia. Alias (2015) stated that Kuala Lumpur station



building is of Mughal Neo Saracen style. Surat et al. (2017) made the classification of all the Malaysian public buildings without making further research on station buildings as a whole. An overall architectural styles statement only on the monumental station building does not give the real image of all station buildings which might have a variety of styles.

However, the architectural styles mentioned by the three researchers named above were taken into consideration when studying the station buildings made of the West Coastline of Malaysia. In Malaysia, with reference to various types and sizes of West Coastline railway station buildings during the British era (in late 19<sup>th</sup> century to the middle of 20<sup>th</sup> Century), in the catalogue, it can be concluded that there are five types of architectural styles. The five architectural styles are; 1. Traditional vernacular style, 2. Mughal – Turkish Islamic style, 3. Moorish, 4. Neo – Classical style (British Palladian, Renaissance and Baroque) and 5. Art Deco style.

### **Traditional Vernacular style**

Station buildings during the earlier years when it was introduced, benefited more ideas and concepts from the vernacular style. The terms vernacular especially relied on local design and traditional skills and buildings built by local builders which suits local conditions and the use of local building materials. It denotes the practice and ideas of Malays before the arrival of colonialist to the country [166]. Generally, it refers to the Malay traditional residential buildings, mostly the Malay houses. The traditional Malay house is a rectangular shaped timber house raised on stilts, with a thatched gabled roof (Figure 4.119). Wood is the main material source which is well adapted to the local climate.

In the catalogue, it can be seen that 44 percent of the station buildings were built with timber and have gabled roofs. Gabled roofs are widely used in the Peninsula Malaysia as it suits local climates and environmental raw material. The roof gables and large windows provide openings

for optimum cross ventilation in roof space and in the building respectively, while the generous overhangs, provide protection from rain and sun. Decorative ventilation panels were normally used in palaces and home of wealthy Malays [167]. But in station buildings, none of the lattice panels are decoratively carved as most are louvered and leaded.

Another vernacular decorative element such as rod type finials were seen in few station buildings built before 1905, Taiping Station, Resident Station, Ipoh Station, Sungei Siput Station, and Tank Road Station. This solid wood finial is a product of one of the traditional woodcarving arts of Malay, which is normally fixed as a decorative element at the end of roof ridge or at the tip of the gable. Suburban station buildings or small station buildings in a rural area normally sought to reflect the values of local people and blend with the local surroundings.



Figure 4.119 The Malay house of timber construction and gabled roof [168]



Figure 4.120 The full window of Malay house with decorative ventilation panels [169]

### **Mughal (Turkish) Islamic style**

This style was introduced into Malaya by the British, during their colonization around 1890's. During the high time (1875-1905) of British colonization in India, the British Raj<sup>31</sup> style or later known as Indo-Saracenic<sup>32</sup> style was spread all over India, Britain and other British colonies. It is a combination of the European styles, Roman, Byzantine, and Renaissance together with the style of the Mughal Empire. But the terms Indo-Saracenic was an “idle” word for many as researchers preferred to use Anglo –Indian [170] or Moghul Neo-Saracen [10] or Neo- Mughal [11] for expressing the style. Meanwhile, the Malaysian Institute of Architects stated in their project, ‘The AB Hubback Project’, that the Kuala Lumpur Railway Station Building is of “Mogul Style or Indian Moorish and ?” architectural style. The question mark shows that it was undecided which architectural style combinations made the building.

<sup>31</sup> British Raj refers to the styling before EEIC in India being disbanded in 1857. The style based on European classical style, Gothic and British Victorian. Mostly applied to the buildings of early colonial period in India (Metcalf, 1989).

<sup>32</sup> According to Sir Richard Temple, Indo-Saracenic is a style which unite the usefulness of the scientific European design together with the beauty, taste, grandeur, sublimity of the Indian native style (Metcalf, 1989). It is used for the British buildings of the later 19<sup>th</sup> century in India.

The Mughal style refers to the architecture of southern Asia, owes to the patronage of the Mughals being one of the most creative and richest periods. Mughal means ‘the Mongols’ or ‘Mongolians’ in Arabic and Persian language. As Babur is the founder of the Indian Mughal dynasty of Timurid–Mongolian heritage, they became more Indianized by time although the Chaghatay Turki language was spoken in the family until 1600 [123].

The Mughal style can be seen in the monumental station building on the West Coastline, Kuala Lumpur Railway station building (Cat.No.5.3). The element accepted as the Mughal Islamic, is the onion-shaped dome. Onion-shaped domes were placed on top of the circulation towers dominated the building skyline. Onion-shaped domes of Kuala Lumpur station building were put on top of the building resembles the main features of the Mughal style, as onion-shaped domes was popularized during the Mughal Empire. Looking closer to the onion-shaped domes, *güldeste* (flower bunch pinnacles) were stacks around the edge of the octagonal dome-base (Cat.No.5.3.16 – No.2). Flower bunch pinnacles can be found in many British colonial buildings in India, for example Chennai High Court and Prince of Wales Museum Seremban Station also has onion-shaped dome placed on top of the clock tower. The onion-shaped dome surmounted with moon crescent finial also has the effect of the Mughal style. Moon-shaped finials are widely used throughout the world, from the beginning of the first age, in the Turkish and Islamic world.

Domed-chatri seen dominating the building façade of Kuala Lumpur Station (Cat.No.5.3.10) are one of the characteristics of Mughal-Turkish Islamic. The examples of chatri in Fatehpur Sikri, India (Figure 4.35) and chetr in Topkapi Palace, Turkey (Figure 4.36) are mentioned earlier the text.

Although the horseshoe, pointed horseshoe and multifoil arches are originated in North Africa and Spain, these arches are widely used and are one of the characteristics of the Mughal



architecture. It creates colonnades. It functions as a structural system supporting the roof, verandahs or walkways. High and wide verandas are well adapted to the tropical climate, as they create sheltered and cooling spaces suitable for hot and humid tropical climate of Malaysia.

The concept of having porticoes of the station buildings of Malaysia resembles most of the monumental buildings of India and Pakistan mostly built during the Mughal era such as Buland Darwaza (Figure 4.121) in Agra, India and Badshahi Mosque (Figure 4.122) in Lahore, Pakistan. The combination idea of the ornamentation derived from the buildings might inspired the architects but in much simpler version. The British India Colonial Period also includes the application of porticoes in Indian railway station buildings such as Chennai Egmore Station, Kanpur Central Station and Charbagh Railway Station buildings. One of the important main façade elements is the protruding portico as the lavished ornamentation highlight has resembles with certain architectural styles.



Figure 4.121 The portico with lavished ornamentations such as chatris, battlements, mini onion-shaped domes and guldasta of the Buland Darwaza's great gate in Agra, India [171]

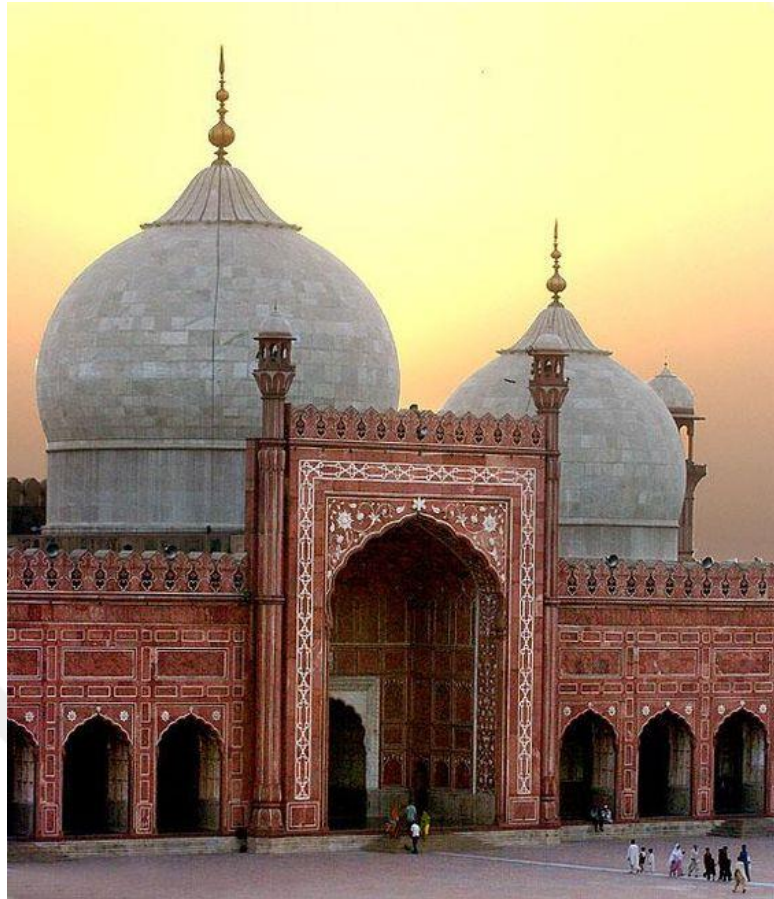


Figure 4.122 The portico with lavished ornamentations such as battlements, guldasta and onion-shaped domes of the Badshahi Mosque, Lahore in Pakistan [172]

### **Moorish Style**

It was a bit contemplating to decide which style as Moorish which seems to be used a lot in arches and also column capitals. As stated by Ghafar, (1993), Moorish is one of the styles influences being adapted by the British in his study titled, Conservation of 1800-1930 British Colonial Buildings.

Moorish style is a combination of Islamic and Gothic architecture spread mostly in Spain, Portugal and North Africa. The Iberian Peninsula was conquered by the Arab armies in 711, who stayed in Spain until 1492. Before the arrival of Arab armies, it was ruled by the Visigoths. In Malaysia, these elements of this style are extensively used and adapted in various arches

seen on British public buildings in Kuala Lumpur. The application of various arches such as horse shoe, pointed horseshoe, ogee and multifoil arches featured in Kuala Lumpur station building emphasizes more on arches used that originated from the Moors architectural world. The horseshoe arches were popular in the Islamic period but the origin can be traced as early as 661 AD during the Visigoth period seen in the Church of San Juan de Banos in Spain.

The adaptation of muqarnas as a column capital in Kuala Lumpur Station building (Cat.No.5.3.11 – No.3) can be seen connected to its wide Islamic architecture all over the Islamic world, in Alhambra Palace too (Figure 4.54). Muqarnas were widely use throughout the Muslim world usually associated with domes, doorways, niches and column capitals [173].

### **Neo – Classical style**

The neo – classical style is the interpretation of the old classical architecture of ancient Greek-Ionia, Rome being revived in the neo-classical and eclectic style of the 19<sup>th</sup> century seen in the station and public buildings made by the British in Malaysia. Ancient Greek and Roman buildings are temples and palaces, all the architectural elements of plundered and interpreted again forming partially a native style. In the late 18<sup>th</sup> and 19<sup>th</sup> centuries, various public buildings such as municipal offices, courts, town hall and offices, railway station buildings, post offices, and also schools rise as a symbol of Britain's national pride and achievements showing their political and economic strength throughout the world.

### *British Palladian and Edwardian Baroque*

The British Palladian<sup>33</sup> recognized also as Palladian Revival is an evolution of Palladio's original concepts. Comprises of two period of styles, 1. Anglo-Classic or 17<sup>th</sup> century style and 2. Queen Anne, the Georgian or 18<sup>th</sup> century style, the founder, Inigo Jones and Sir Christopher Wren were the famous British architects who adores Palladio's works. Palladio's works have been carefully studied by Inigo Jones hence had a great influence in English architecture [174].

The Baroque in neo-classical style was known as Edwardian Baroque<sup>34</sup> in Britain. Many of public buildings in the British Empire were built during this era, 1901-1910. The name derived from the Edwardian era during the reign of King Edward VII.

It seems that the British Palladian and Edwardian Baroque mostly shares the same architectural characteristics such as vousoir arches, triangular pediments on windows and doors, segmental arched pediments, colonnades sometimes with paired columns, domed towers, rustication elements and engaged columns.

Their influences can be seen in Malaysian railroad station buildings for example, in the Ipoh station building. This station has a hotel on the second floor. It was located in the main city of tin industry in the Perak state, designed by architect, A.B. Hubback.

One of the Palladian elements is the long balustrade, used almost systematically to define the horizontal roofline interrupted by columns or pinnacles (Cat.No.24.2.5 – No.3 & 4) acts as the parapet walls of the Ipoh Station building. The Palladian baluster normally comprises of double-bellied of bulbous vase-shaped or 'vase-baluster', of simple shape.

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<sup>33</sup> Palladian architecture was popularized by Italian architect, Andrea Palladio who admired ancient Roman architecture.

<sup>34</sup> Edwardian Baroque were drawn from two main components; the English Baroque during 17<sup>th</sup> century (in England) and 18<sup>th</sup> century (in France) of Sir Christopher Wren and the Grand style during the later period 1910s and 1920s of Sir Edwin Lutyens.



There are 3 protruding porticoes surmounted with triangular (in the middle, Cat.No.24.2.7) and segmented (both sides, Cat.No.24.2.8) pediments. The symmetrical façade of Ipoh Station is one of the features of Palladian style as it resembles the Palladian villa and Roman temple. Segmental arched pediments on both sides of the main portico are typical features of Edwardian Baroque style.

A well-known tripartite Palladian large window consist of a central arched section flanked by two narrow rectangular sections (Cat.No.24.2.7 – No.4). It can be seen on all the three porticoes of Ipoh Station buildings' main façade. Tripartite window or venetian window features always incorporates with the Palladian style.

Meanwhile, at both ends of the main façade are two towers on which, quoins are placed on the corner with equal and alternate joints and stone-like elements which originates from Renaissance architecture. These quoins are also seen in other West Coastline small station buildings such as Taiping station (Cat.No.1.1), old Kuala Lumpur station (Cat.No.5.2 – Image 10), Pudu Station (Cat.No.20.1) and Serendah station (Cat.No.21).

The Ipoh stations' domes are pointed domes. Their structures are made of steel and coated with concrete (MASSA, 2013). They have 3 different sizes. The main and biggest dome is located in the middle of the building which resembles the Edwardian Baroque building's way of using domes. Tower creates lively rooftop silhouettes.

Lastly the Serlian arcade (rusticated arcade) also an element of the Palladian architecture is seen in Ipoh station. This arcade dominating the first floor of the main façade highlights and heightens the importance of the ground floor.

Rustication elements were introduced in ancient times (Greek and Roman), are also used in medieval castles and other buildings. It became popular during Renaissance in Italy. Tanjong

Pagar Station applied the smooth-faced rustication where the walls had smooth finishes with an ashlar effect, (Cat.No.134.1.1 – No.2). Rustication here is a dummy appearance of sandstone walls as seen in most old buildings in the UK. Extract thick lime plasters were used to create such an effect.

### *Neo Renaissance*

The elements of Renaissance<sup>35</sup> are seen in Ipoh station building (Cat.No.25.2) on its casement windows with triangular and segmental pediments. The triangular pediments were broken downwards towards the window panels similar to the ones used in the Palazzo Farnese, Rome (Figure 4.123).

Meanwhile similarly the use of segmental pediments is seen in Campidoglio Palace, Rome Italy (Figure 4.124). Triangular pediment trims are also found on the doors of Ipoh Station building which are similar to the windows used.

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<sup>35</sup> Renaissance is a style developed in Florence early 15<sup>th</sup> century and it was then widely spread in other Europe countries.



Figure 4.123 Triangular pediment windows broken at the lower part towards window panels, Palazzo Farnese, Rome [175]



Figure 4.124 Segmental pediment windows broken at the lower part towards window panels, Campidoglio Palace, Rome [176]

This style is also seen in the window elements of the monumental station building, Tanjong Pagar Station (Cat. No. 135). The round arched windows dominate the ground floor (Cat.No.135.1.5). Round arch is one of the popular features used in Renaissance buildings. Circular arch window with the keystone in the middle head in Tanjong Pagar Station building.

The detailing has small lion figurines, dentils, egg-and-darts cornices, (Cat. No.135.1.8 – No. 1 & 2).

## **Art Deco**

In the 1930s, Art Deco style became popular as it can be seen mostly in on the façades of shophouses and office buildings in Malaysia (Figure 4.75, Figure 4.76). The Art Deco in Malaysia strongly emphasize vertical and horizontal elements and more the use of abstract geometrical shapes. It replaces the earlier styles much inclined to use decorative features on the façades of the buildings. In the United States, Art Deco refers to buildings associated with entertainment. This style also has great influence on Johore Bahru Station in Johor (Cat.No.109.2) and Tanjong Pagar Station, Singapore (Cat.No.135). Both of these buildings applied concrete flagpoles as it was one of the most common features of the Art Deco styles.

The Art Deco in Malaysia also has been localized in order to suit the climate. For example, the introduction of concrete canopies on top, resembling and working as window trim to create an effect similar to roof overhangs providing shades as similar to Wisma Ekran building (Figure 5.76).

Another characteristics of Art Deco is the use of sculpture and reliefs. Sculpture or allegorical figures are used normally on the building façades and particularly over the entrance. Allegorical figures used as a rhetoric means to convey the meaning of the buildings purposes or themes. In Tanjong Pagar Station (Cat.No.135.1.9), four allegorical reliefs are placed on the main four columns of the entrance portico. The allegorical reliefs made of white marble symbolize Agriculture, Commerce, Transport and Industry, the four main sectors of Malayan economy. According to the National Heritage Board of Singapore, these four large sculptures



were made by Angelo Vannetti, a sculptor from Florence, Italy. Furthermore, there are four emblems located on top of each statue representing the initials F, M, S, and R, which stands for Federated Malay States Railways. The emblem consists of an art deco style garland, a shield and floral motifs on each side.

It can be said that, the architectural styles in Malaysia of course, being influenced by the world wide fashion concerning mostly on the late 19<sup>th</sup> century architecture. The last 19<sup>th</sup> century architectural styles seems to be revive from the old styles resulting in newly mixed styles. Though the main influenced came from the British and the British India, the use of a variety historical styles from both sides, surely made the buildings unique in characteristic.

#### 4.4 CONCLUSION

Railway station buildings are the result of industrial developments made by economic progressions in the 19<sup>th</sup> century of tin mining industry of Malaysia. As stated in 1961, journal of architectural history titled, *The Inception of the English Railway Station*, “for all building in general, owes its birth to necessities, nursed by convenience and embellished by use, pleasures were the last things consulted in it”. Owing their birth to necessity, railway station buildings bloomed parallel to the railroads dispersion from the upper northern of Peninsula Malaysia down to the southern state of Johor *until* Singapore.

There were 135 station buildings on the West Coastline of Peninsula Malaysia built during the Colonial British period. By separating the development phases according to the companies, three phases can be determined. In the first phase (1885-1900), the railway system was financed by each state government, in the second phase (1901-1948) it was governed by the Federated Malay States Railways and in the third and last phase (1948-1992) it was governed and financed by the Federated Malay States Railways and the name been changed as Malayan Railways. 58 station buildings were built during the first phase, 77 station buildings were built during the second phase (or 77 more during the second phase), but no station building was built in the third phase due to the Japanese Occupations. It was found that 111 station buildings have been demolished, 6 station buildings are closed and preserved, 3 are closed and changes its functioned, 3 station building are closed and abandoned, and the remaining 12 station buildings are still in operation.

The British Colony started constructing station buildings during 1886, late 19<sup>th</sup> Century, and ended somewhere in the middle of the 20<sup>th</sup> Century in 1957, as Malaysia gained its independence. Throughout the decades, the stations experienced upgrades and matured into a form that they may last for the next hundred years. Initially built small, the station buildings

were equipped with basic necessities. When the population grew, the buildings then were expanded (categorized as medium) and finally became massive monuments (categorized as large) when demand for tin ores and agricultural products such as rubber, pepper and cocoa increased to fulfill the ever-growing populace.

In the beginning, the station buildings started with simple constructions of Malay vernacular architectural building with similar elements by using timber and an attap or thatched roof seen in their early examples seen in Bukit Kuda station in Klang where basic facilities such as ticket office and waiting area are implemented.

Later the medium size station buildings added more facilities like a canteen or a restaurant, also added an entrance porch for picking up and dropping off passengers. Even some of these medium size station buildings, like the Seremban, Alor Setar and Johor Bahru Station buildings were added clock towers, as an element of the new era. Not only does the clock tower tell time, but it is also a symbol of the British power and political significance. The usage of clock tower led to the use of standardized time as they were using the Greenwich Mean Time of the Royal Observatory set in Greenwich, London.

The vernacular architectural elements used in these buildings are likely based on the availability of the materials. Local needs normally reflect local custom and traditions. Several characteristics have been adapted in compliance with the climatic conditions and local needs. The usage of expansive windows, doors and walls in station buildings by the applications of lattices on its upper and lower parts and 'open spaces' or verandah areas (serambi or anjung) are planning concepts used in Malaysian vernacular architecture. Especially the traditional Malay house that give optimum airiness to the building. As Malaysia is located on the equatorial region and having heavy rainfalls throughout the year, most of the roof types used in the station buildings were gable roofs. Decorative elements of traditional Malay houses can

be seen applied on the tip of some station building roofs for example the finials. Fascia boards which were decoratively carved with floral and abstract motifs were applied as another traditional architectural feature found in vernacular station buildings. These features can also be found in British station buildings but with different motifs used. It can be said that most of the small and medium size station buildings adapted the vernacular style. Although they have mainly traditional styles, but are not wholly traditional as they also adopt western architectural elements such as quoins and circular knee braces on columns.

Grandeur station buildings started being built in the early 20<sup>th</sup> century and are only built in the major and important towns for tin mining industry such as Kuala Lumpur and Ipoh. Most of the monumental station buildings, like Kuala Lumpur, Ipoh, Johor Bahru and Tanjong Pagar offered hotel accommodations additional to other railway facilities. The British used a different approach in designing the monumental station buildings as they had to have a picturesque effect, portraying prosperousness and wealth of the British Malaya.

The British wanted to legitimize their occupation in Malaysia by applying Islamic principles in their buildings as to find easiness and comfort of the Malay sultans and people as after the year 1400, when Islam became the main religion in the country. It is clear that in the railway building architecture in Malaysia, a wide range of architectural styles had been applied such as Traditional Vernacular, Mogul-Turkish-Islamic-India, Moorish, Neoclassical and Art Deco as a result of international effects. The architectural styles were rich, blends of various eastern and western styles while some of the station buildings were simple with few, even one style preferred. Some of the monumental railway station buildings such as Kuala Lumpur, Ipoh and Tanjong Pagar which were influenced from the surrounding political, social, economic, religious affects and maybe from the spirit of the place itself.



The Mughal-Turkish-Islamic architectural influences from India, originally came from the Mogul-Turkish empire can be seen in the station buildings of Malaysia. During the Akbar reign (1556-1605) the Hindu elements and the Islamic elements started to coalesce. Amongst the architectural features introduced and adapted in designing the Malaysian station buildings are, onion domes and hemispherical domes, chatri, pinnacles or guldasta and other elements used on the protruding porticoes.

The Moorish architectural influence can usually be seen on the arches and columns of Malaysian station buildings. The horseshoe arch, the pointed horseshoe arch, the ogee arch, and multifoil arch are originally introduced from Spain seen as early as the Visigoth period in Spain. The muqarnas column capital was also first introduced in Islamic Spain and India.

Neoclassical Western styles were introduced in Malaysia by the British architects; Arthur Charles Norman and Arthur Benison Hubback. The British architects came and worked in the Public Work Departments adopted their home architectural styles when designing station buildings. This home style dominated in Britain where it was famously known as the Georgian style beginning from early 18<sup>th</sup> century until the middle of 18<sup>th</sup> century. The Georgian style appeared simpler compared to the later, the Baroque style. Some of their architectural features are triangular and segmental pediments, segmental arches, classical column capitals of egg-and-darts molding, quoins, Voussoir arches, pointed domes, hemispherical domes, and the rustication effects on walls.

According to Fletcher (1905), all the countries brought under the influence of Mahometan which consists of Persia, Mesopotamia, Syria, Palestine, Egypt, Turkey, North Africa, Spain and India, fall under the Saracenic architecture. The outdated term 'Saracen' which is still current in Malaysia refers to the tribes occupying the desserts west of the Euphrates derived by the Greeks and Romans. As the name was given to the followers of Mahomet, it was used

entirely irrespective of their nationality. The British used the term, 'Indo Saracenic' for colonial architecture that adopted the elements of native architecture and for the 'modern' architectural styles of India. It was a combination of European and native traditional arts and modern functions [177]. Meanwhile during the late 19<sup>th</sup> century in British India, the British Indian architects started to discard the Victorian Gothic architecture and shifted to Indo Saracenic Revival architecture as they considered that the Victorian Gothic architectural style was not appropriate anymore. Indo Saracenic Revival is a combination of Indo-Islamic and Indian architecture combined with Gothic Revival and Neoclassical styles. This style spread widely in British India and Britain itself, which then became a preferred style in Malaya and all the British colonies.

There are two monumental station buildings being affected by architectural styles mentioned earlier; the Kuala Lumpur and Ipoh station buildings. The decision to rebuild the new Kuala Lumpur Station building was made by the British in 1906, and the architect entrusted in designing the station was A.B. Hubback. In order to classify the architectural styles influenced on Kuala Lumpur station building, the overall picture of the façade elements are scrutinized. To portray the Islamic faith of the Malays, the architect, A.B. Hubback looked to the Islamic architecture for inspiration whereby he envisioned a landmark highlighting the best of Moorish, Mughal-Turkish Islamic with a combination of Palladian influences. These styles can be seen on the overall façade where mainly, the usage of various Moorish arches making colonnades meanwhile the influences of Palladian, white-stuccoed finishes dominating the walls on the ground floor. Mughal architecture characteristics can be seen used for the design of the roof skyline; with domed-chatris, onion domes, pinnacles, guldasta and the parapets. Looking at the ground floor of the façade, the walls mostly represent the European effect of the Palladian and Neo-classical style. Although this station building dominantly having more of the Moorish – Mughal architecture; which mostly derived from Islamic architecture; the British still injected

some of their home country style making it a combination of Eastern and Western influences creating a newer style called Eclecticism. It can be stated that, the Kuala Lumpur Station building is of Oriental Eclectic style.

Meanwhile, the Ipoh station building was built in 1917. The station was heavily decorated with Neo Classical, British Palladian elements such as triangular and segmental pediments of parapets, windows and doors, the Venetian window on the three protruding porticoes, the stuccoed arches and walls, quoins, balustrades, pinnacles, columns of eggs and darts capital and pointed domes. The ground floor walls are rough façade of grey stones systematically arranged in single Flemish bond and continued with stuccoed of round arches creating a truly Palladian style. The triangular and segmental pediments of the window trims were broken downwards, showed that they are the influences from the Renaissance as the examples can be seen in Palazzo Farnese, Rome. Besides Palladian, Mughal-Turkish influences also can be seen on the building's façade, the pinnacles derived from the idea of chatra as it have eight columns surmounted with smaller domes. As a results, this station building is exhibiting more of the Neo-Classical style with Palladian, Renaissance and rustication elements incorporated with some influences of Mughal Islamic architecture. Although this station building predominantly have more of the British Palladian architecture, at the same time, the British also adopted the Islamic influences suiting the particular requirements of Islamic country making it a combination of Western and Eastern influences creating a style called Eclectic. It can be stated that, the Ipoh Station building is of European Eclectic style.

The Art Deco style started to spread in Malaysia around 1930 to 1940. The Art Deco style normally characterized by usage of horizontal and vertical elements and the abstract geometric shapes, can be seen applied onto station buildings having flag poles, smooth – faced stone and allegorical sculptures.

The other two monumental station buildings are of Art Deco style dominant. Johor Bharu station and Tanjong Pagar station, Singapore was planned to be build, the Art Deco movement starts to spread from Penang to Kuala Lumpur and mostly affected the facades shophouses and offices. While on office buildings, there are sometimes reliefs or allegories placed on the buildings' façade and the double-panel glass windows normally have individual concrete canopies in compliance with the weather. The main features on the shophouses are concrete moulded flagpoles and simple double panels glass window. Johor Bharu station can be stated as of Art Deco style caused it have all the Art Deco dominant features of having concrete moulded flagpole, simple double panels glass windows and a clock tower.

Meanwhile, the Tanjong Pagar Station applied all of the mentioned characteristics with an additional features such as emblems were placed on top of every reliefs with the initials of F, M, S and R which indicates the Federated Malay States Railway. It can be stated that the building also adopted a Chinese Vernacular style because of the use of green glazed roof tiles that are usually found on Chinese buildings and temples. The use of these tiles on the roofs highlighted another characteristic of the Art Deco style which incorporated with local architectural elements. The station also has Neo Classical elements on its circular arches with keystone on the portico and the circular arch windows with keystone on its ground floor. The building's walls are of rustication effects, grey in colour with smooth ashlar effects. This station building is mainly of Art Deco style with the elements of Neo Classical and traditional Chinese vernacular architecture. As a results, it can be determined that Tanjong Pagar Station is of European Eclectic style.

Every building is a manifestation of the era in which it was constructed and has a history of its own. Emerson (1884) stated that every building constructed by the British regardless its functions should have a distinct British character, at the same time adopting the native



architectural style. It can be said that the British wanted to display the stability and power through the massive images of these grandeur and monumental railway station buildings, Kuala Lumpur (1911), Ipoh (1917), Johor Bahru (1930) and Tanjong Pagar station (1932) buildings, all with its own unique characters.

The 133 years of British occupation in Malaysia brought major changes in the local urban setting and architecture. Almost all of the British era buildings demonstrate distinctive design characteristics that are similar to their contemporary designs in England and the British India (the biggest main colony in Southeast Asia) , but at the same time manipulating some interesting features to be responsive to the local climatic conditions. As per now, only few original station buildings exists today, the remaining station buildings that are still in operations also will be destroyed later in order to give way for the new modern technology railway system. Besides, all of the archive materials as a reaction to the colonization has been destroyed. The East Coastline station buildings are also in undetermined conditions after the big flood in December 2014, whereby it was closed and reopened on August 2015. Now, the Malaysia government is making new East Coastline railway tracks called East Coast Rail Link (ECRL) and it is scheduled to be finished in 2024. As a conclusion, it can be stated that the old railway station buildings in Malaysia is effected by the British occupation and resulted essentially in hybrid architectural styles; developed respectively by the years with five main architectural styles; traditional vernacular, Mughal, Moorish, Neo – Classical and Art Deco.

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**Centre for Modern Architecture Studies in Southeast Asia, Taylor's College (MASSA)**

Student works on British Colonial Buildings made by architect, A. B. Hubback.



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